# 8 Installation

# Installation Manual of Room Air Conditioner

## Preparation

### Necessary Tools for Installation

- Driver
- Nipper
- Hacksaw
- Hole core drill
- Spanner(17,19 and 26mm)
- Gas leakage detector or soap-and-water solution
- Torque wrench (17mm,22mm,26mm)
- Pipe cutter
- Flaring tool
- Knife
- Measuring tape
- Reamer

### Power Source

- Before inserting power plug into receptacle, check the voltage without fail. The power source is the same as the corresponding name plate.
- Install an exclusive branch circuit of the power.
- A receptacle shall be set up in a distance where the power cable can be reached. Do not extend the cable by cutting it.

### Selection of Installation Place

Indoor Unit

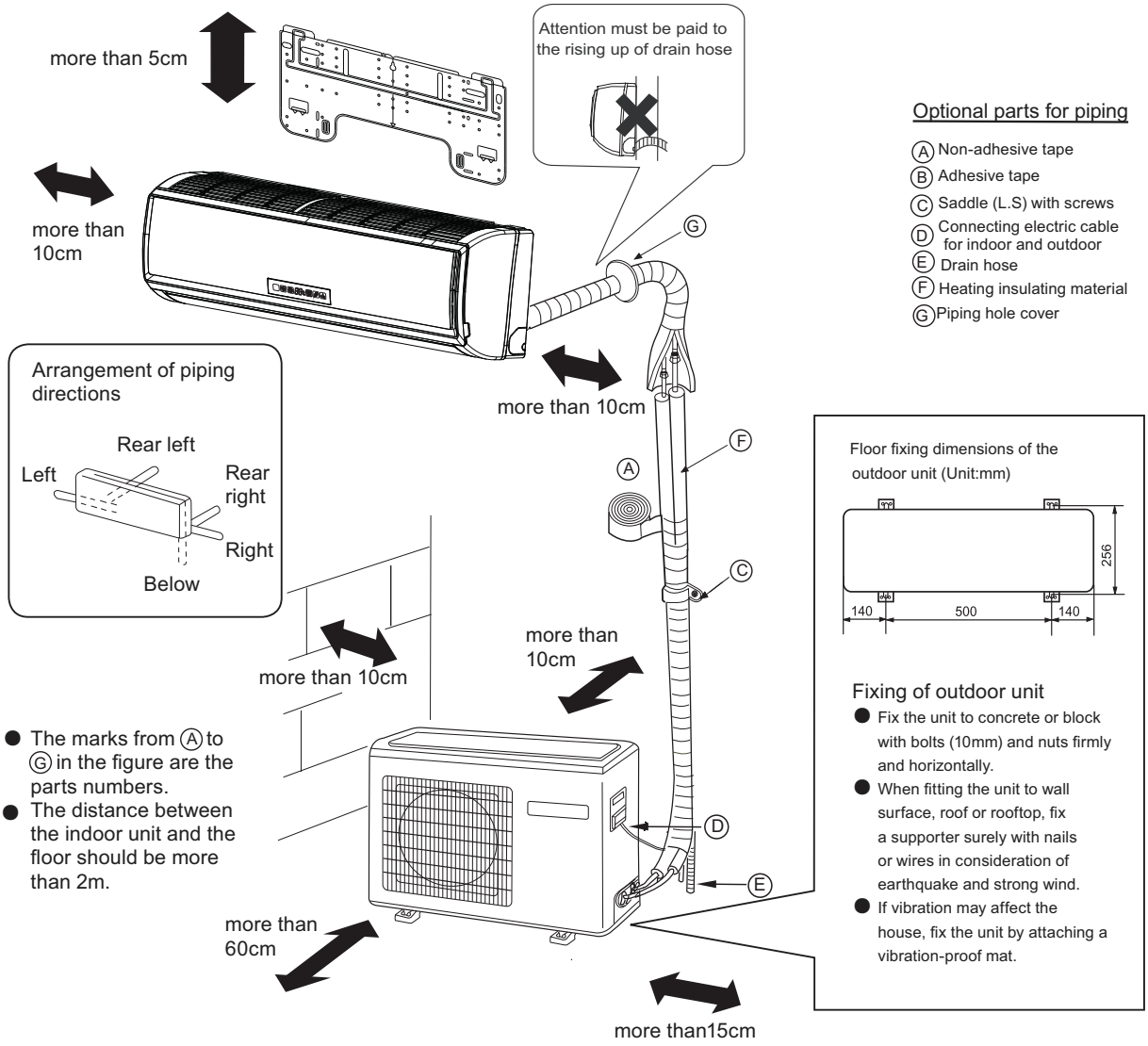
- Place, robust not causing vibration, where the body can be supported sufficiently.
- Place, not affected by heat or steam generated in the vicinity, where inlet and outlet of the unit are not disturbed.
- Place, possible to drain easily, where piping can be connected with the outdoor unit.
- Place, where cold air can be spread in a room entirely.
- Place, nearby a power receptacle, with enough space around. (Refer to drawings).
- Place where the distance of more than lm from televisions, radios, wireless apparatuses and fluorescent lamps can be left.
- In the case of fixing the remote controller on a wall, place where the indoor unit can receive signals when the fluorescent lamps in the room are lightened.

Outdoor Unit

- Place, which is less affected by rain or direct sunlight and is sufficiently ventilated.
- Place, possible to bear the unit, where vibration and noise are not increased.
- Place, where discharged wind and noise do not cause a nuisance to the neighbors.
- Place, where a distance marked ↔ is available as illustrated in the above figure.

## Drawing for the installation of indoor and outdoor units

The models adopt HFC free refrigerant R410A




Optional parts for piping

- (A) Non-adhesive tape
- (B) Adhesive tape
- (C) Saddle (L.S) with screws
- (D) Connecting electric cable for indoor and outdoor
- (E) Drain hose
- (F) Heating insulating material
- (G) Piping hole cover

Floor fixing dimensions of the outdoor unit (Unit:mm)




Fixing of outdoor unit

- Fix the unit to concrete or block with bolts (10mm) and nuts firmly and horizontally.
- When fitting the unit to wall surface, roof or rooftop, fix a supporter surely with nails or wires in consideration of earthquake and strong wind.
- If vibration may affect the house, fix the unit by attaching a vibration-proof mat.

- The marks from (A) to (G) in the figure are the parts numbers.
- The distance between the indoor unit and the floor should be more than 2m.

Please be subject to the actual product purchased , the above picture is just for your reference.

Read this manual before installation

Explain sufficiently the operating means to the user according to this manual.

NO.0010531116

| Accessory parts | |
|---|---|
| Remote controller (1) | Drain hose (1) |
| R-03 dry battery (2) | Cushion (4) |
| Mounting plate (1) | Drain-elbow (1) |
| Plastic cap (4)<br>Ø4X25 Screw (4) | Pipe supporting plate (1) |

| Selection of pipe | |
|---|---|
| Liquid pipe (Ø) | 6.35mm(1/4") |
| Gas pipe (Ø) | 12.7mm(1/2") |

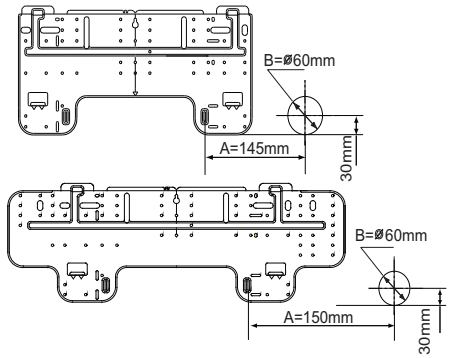
NOTE：The thickness of the pipe must be 0.8mm at least.

## Indoor unit

### 1 Fitting of the Mounting Plate and Positioning of the wall Hole

#### When the mounting plate is first fixed

1. Carry out, based on the neighboring pillars or lintels, a proper leveling for the plate to be fixed against the wall, then temporarily fasten the plate with one steel nail.
2. Make sure once more the proper level of the plate, by hanging a thread with a weight from the central top of the plate, then fasten securely the plate with the attachment steel nail.
3. Find the wall hole location A using a measuring tape

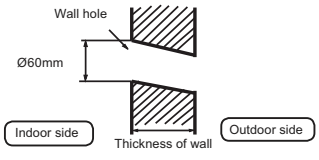



#### When the mounting plate is fixed side bar and lintel

- Fix to side bar and lintel a mounting bar, Which is separately sold, and then fasten the plate to the fixed mounting bar.
- Refer to the previous article, " When the mounting plate is first fixed ", for the position of wall hole.

### 2 Making a Hole on the Wall and Fitting the Piping Hole Cover

- Make a hole of 60 mm in diameter, slightly descending to outside the wall.
- Install piping hole cover and seal it off with putty after installation




(Section of wall hole) Ⓖ Piping hole pipe

### 3 Installation of the Indoor Unit

#### Drawing of pipe

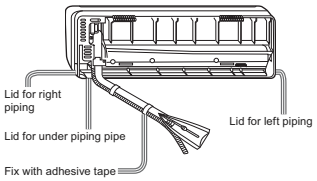
[ Rear piping ]

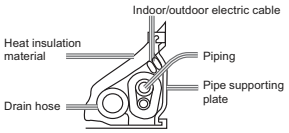
- Draw pipes and the drain hose, then fasten them with the adhesive tape

[ Left· Left-rear piping ]

- In case of left side piping, cut away, with a nipper, the lid for left piping.
- In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.

1. Insert the drain hose into the dent of heat insulation materials of indoor unit.
2. Insert the indoor/outdoor electric cable from backside of indoor unit, and pull it out on the front side, then connect them.
3. Coat the flaring seal face with refrigerant oil and connect pipes. Cover the connection part with heat insulation materials closely, and make sure fixing with adhesive tape



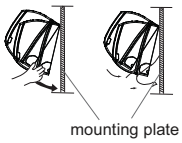

- Indoor/outdoor electric cable and drain hose must be bound with refrigerant piping by protecting tape.

[ Other direction piping ]

- Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to theposition of wall hole. When bending, be careful not to crash pipes.
- Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.

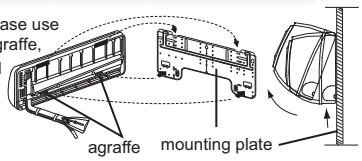
#### Fixing the indoor unit body

- Hang surely the unit body onto the upper notches of the mounting plate. Move the body from side to side to verify its secure fixing.
- In order to fix the body onto the mounting plate,hold up the body aslant from the underside and then put it down perpendicularly.




#### Unloading of indoor unit body

- When you unload the indoor unit,please use your hand to arise the body to leave agraffe, then lift the bottom of the body outward slightly and lift the unit aslant until it leaves the mounting plate.




### 4 Connecting the indoor/outdoor Electric Cable

#### Removing the wiring cover

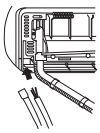
- Remove terminal cover at right bottom corner of indoor unit, then take off wiring cover by removing its screws.

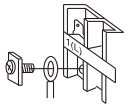
#### When connecting the cable after installing the indoor unit

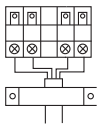
1. Insert from outside the room cable into left side of the wall hole, in which the pipe has already existed.
2. Pull out the cable on the front side, and connect the cable making a loop.

#### When connecting the cable before installing the indoor unit

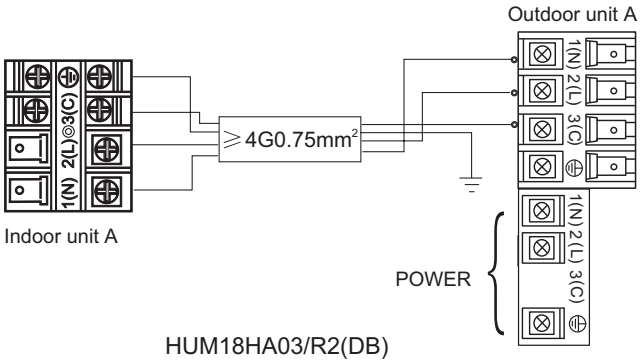
- Insert the cable from the back side of the unit, then pull it out on the front side.
- Loosen the screws and insert the cable ends fully into terminal block, then tighten the screws.
- Pull the cable slightly to make sure the cables have been properly inserted and tightened.
- After the cable connection, never fail to fasten the connected cable with the wiring cover.





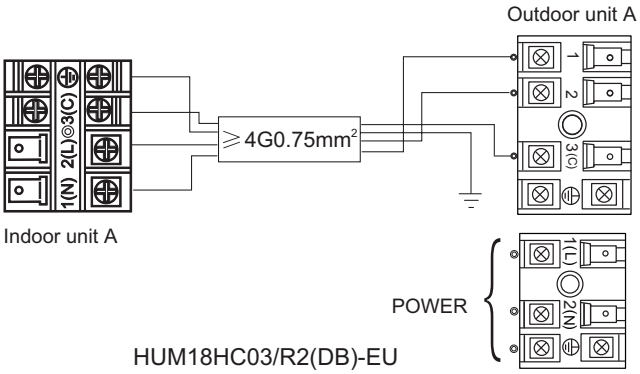


**Note** When connecting the cable, confirm the terminal number of indoor and outdoor units carefully. If wiring is not correct, proper operation can not be carried out and will cause defect.




HUM18HA03/R2(DB)
HUM18HB03/R2(DB)

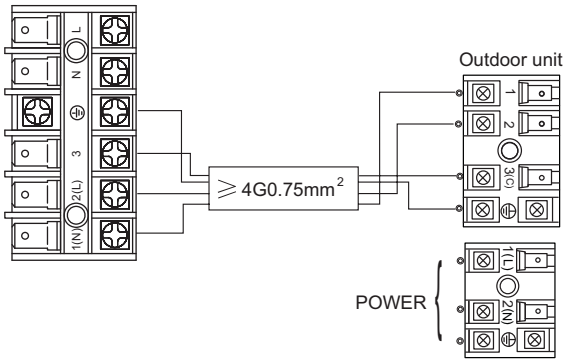
Power cable: ≥3G2.5mm²




HUM18HC03/R2(DB)-EU

Power cable: ≥3G2.5mm²

Indoor unit




HFM18HC03/R2(DB) HUM18HC03/R2(DB)-EU

Power cable: ≥3G2.5mm²

1. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person. The type of connecting wire is H05RN-F or H07RN-F.
2. If the fuse on PC board is broken please change it with the type of T. 3.15A/250V.
3. The wiring method should be in line with the local wiring standard.
4. After installation, the power plug should be easily reached.
5. A breaker should be incorporated into fixed wiring. The breaker should be all-pole switch and the distance between its two contacts should be not less than 3mm.

## Outdoor unit

### 1 Installation of Outdoor Unit

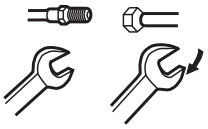
Install according to Drawing for the installation of indoor and outdoor units

### 2 Connection of pipes

- To bend a pipe, give the roundness as large as possible not to crush the pipe , and the bending radius should be 30 to 40 mm or longer.
- Connecting the pipe of gas side first makes working easier.
- The connection pipe is specialized for R410A.

Half union Flare nut

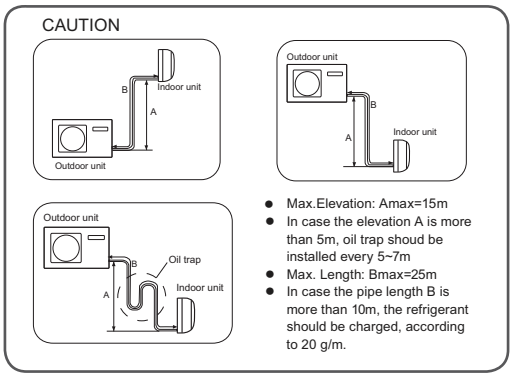
Forced fastening without careful centering may damage the threads and cause a leakage of gas.



Spanner Torque wrench

| Pipe Diameter(ø) | Fastening torque |
|---|---|
| Liquid side6.35mm(1/4") | 18N.m |
| Liquid/Gas side9.52mm(3/8") | 42 N.m |
| Gas side 12.7mm(1/2") | 55N.m |
| Gas side 15.88mm(5/8") | 60 N.m |

Be careful that matters, such as wastes of sands, etc. shall not enter the pipe. The standard pipe length is 5m. If it is over 10m, the function of the unit will be affected. If the pipe has to be lengthened, the refrigerant should be charged, according to 20 g/m. But the charge of refrigerant must be conducted by professional air conditioner engineer. Before adding additional refrigerant, perform air purging from the refrigerant pipes and indoor unit using a vacuum pump,then charge additional refrigerant.




- Max.Elevation: Amax=15m
- In case the elevation A is more than 5m, oil trap shoud be installed every 5~7m
- Max. Length: Bmax=25m
- In case the pipe length B is more than 10m, the refrigerant should be charged, according to 20 g/m.

### 3 Connection

- Use the same method on indoor unit. Loosen the screws on terminal block and insert the plugs fully into terminal block, then tighten the screws.
- Insert the cable according to terminal number in the same manner as the indoor unit.
- If wiring is not correct, proper operation can not be carried out and controller may be damaged.
- Fix the cable with a clamp.

### 4 Attaching Drain-Elbow

- If the drain-elbow is used, please attach it as figure. (Note: Only for heat pump unit.)

### 5 Purging Method:To use vacuum pump

1. Detach the service port's cap of 3-way valve, the valve rod's cap for 2-way valve and 3-way's, connect the service port into the projection of charge hose (low) for gaugemanifold. Then connect the projection of charge hose (center) for gaugemanifold into vacuum pump.
2. Open the handle at low in gaugemanifold, operate vacuum pump. If the scale-moves of gause (low) reach vacuum condition in a moment, check 1. again.
3. Vacuumize for over 15min.And check the level gauge which should read -0.1MPa (76 cm Hg) at low pressure side. After the completion of vacuumizing, close the handle 'Lo' in gaugemanifold and stop the operation of the vacuum pump. Check condition of the scale and hold it for 1-2min. If the scale-moves back in spite of tightening, make flaring work again, the return to the beginning of 3 .
4. Open the valve rod for the 2-way valve to an angle of anticlockwise 90 degrees. After 6 seconds, close the 2-way valve and make the inspection of gas leakage.

5. No gas leakage?

In case of gas leakage, tighten parts of pipe connection. If leakage stops, then proceed 6. steps

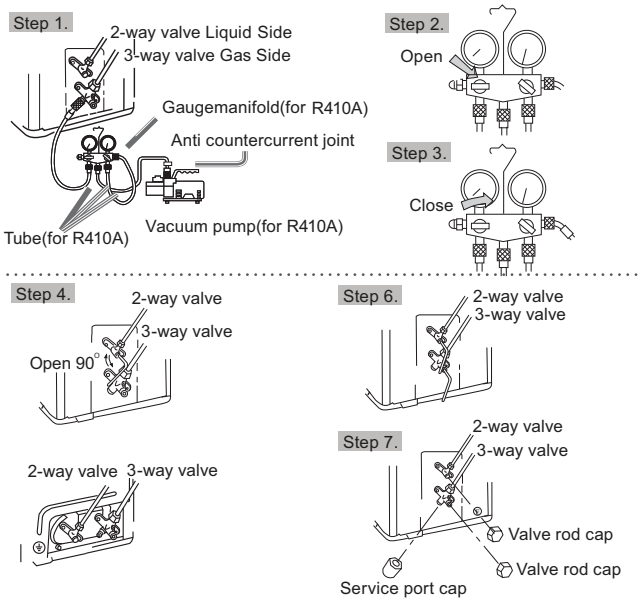
↓

If it does not stop gas leakage, discharge whole refrigerants from the service port. After flaring work again and vacuumize, fill up prescribed refrigerant from the gas cylinder.

6. Detach the charge hose from the service port, open 2-way valve and 3-way. Turn the valve rod anticlockwise until hitting lightly.

7. To prevent the gas leakage, turn the service port's cap, the valve rod's cap for 2-way valve and 3-way's a little more than the point where the torque increases suddenly.

8. After attaching the each caps, check the gas leakage around the caps.




## CAUTION

- If the refrigerant of the air conditioner leaks, it is necessary to discharge all the refrigerant. Vacuumize first, then charge the liquid refrigerant into air conditioner according to the amount marked on the name plate.
- Please do not let other cooling medium, except specified one (R410A), or air enter into the cooling circulation system. Otherwise, there will be abnormal high pressure in the system to make it crack and lead to personal injuries.

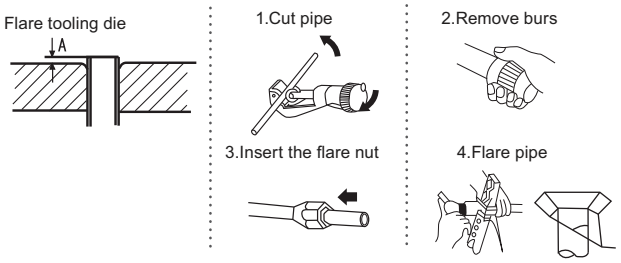
## 1 Power Source Installation

- The power source must be exclusively used for air conditioner. (Over I0A)
- In the case of installing an air conditioner in a moist place, please install an earth leakage breaker.
- For installation in other places, use a circuit breaker as far as possible.

## 2 Cutting and Flaring Work of Piping

- Pipe cutting is carried out with a pipe cutter and burs must be removed.
- After inserting the flare nut, flaring work is carried out.

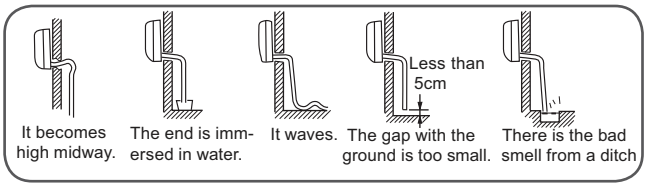
| | Flare tool for R410A | Conventional flare tool | |
|---|---|---|---|
| | Clutch-type | clutch-type(Rigid-type) | Wing-nut type (Imperial-type) |
| A | 0~0.5mm | 1.0~1.5mm | 1.5~2.0mm |




| Correct | Incorrect | | | | |
|---|---|---|---|---|---|
| | Lean | Damage of flare | Crack | Partial | Too outside |

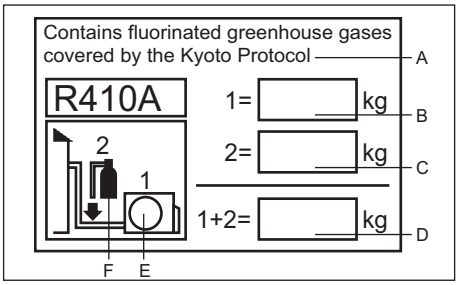
## 3 On Drainage

- Please install the drain hose so as to be downward slope without fail.
- Please don't do the drainage as shown below.


Less than 5cm
It becomes high midway.
The end is immersed in water.
It waves.
The gap with the ground is too small.
There is the bad smell from a ditch

- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out surely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.

## ■ Refrigerant charge label




This product contains fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent into the atmosphere.
Refrigerant type:R410A
GWP* value:1975
GWP=global warming potential
Please fill in with indelible ink,
• 1 the factory refrigerant charge of the product
• 2 the additional refrigerant amount charged in the field and
• 1+2 the total refrigerant charge
on the refrigerant charge label supplied with the product.
The filled out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the stop value cover).
A contains fluorinated greenhouse gases covered by the Kyoto Protocol
B factory refrigerant charge of the product: see unit name plate
C additional refrigerant amount charged in the field
D total refrigerant charge
E outdoor unit
F refrigerant cylinder and manifold for charging

## ■ Check for Installation and Test Run

■ Please kindly explain to our customers how to operate through the instruction manual.

### Check Items for Test Run

□ Put check mark ✓ in boxes

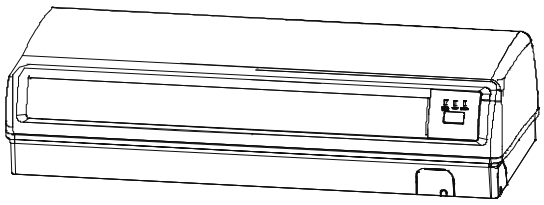
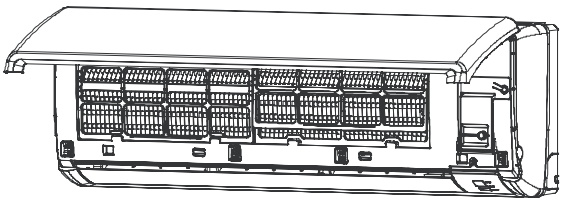
- □Gas leak from pipe connecting?
- □Heat insulation of pipe connecting?
- □Are the connecting wirings of indoor and outdoor firmly inserted to the terminal block?
- □Is the connecting wiring of indoor and outdoor firmly fixed?
- □Is drainage securely carried out?
- □Is the earth line securely connected?
- □Is the indoor unit securely fixed?
- □Is power source voltage abided by the code?
- □Is there any noise?
- □Is the lamp normally lighting?
- □Are cooling and heating (when in heat pump) performed normally?
- □Is the operation of room temperature regulator normal?

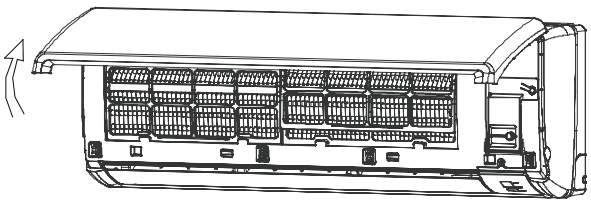
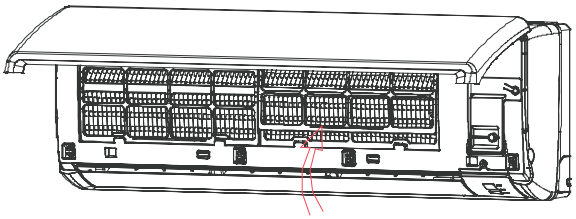
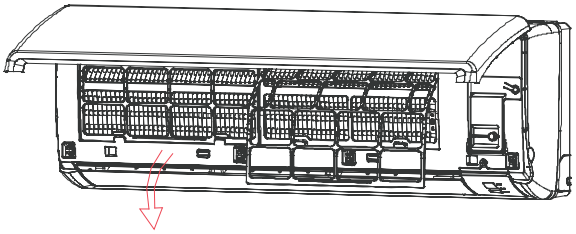
# 9. Removal Procedure

## 9.1 Removal of indoorunit (HSM18HEKC03/R2(DB))

Procedure

Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

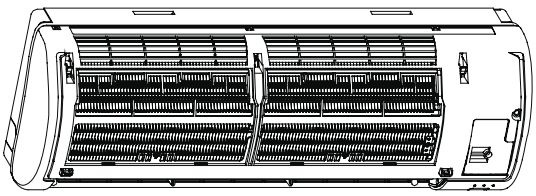
| Step | Procedure | Points |
|---|---|---|
| 1. Features |  | |
| 2. Remove the air filters. | | |
| 1 Hold the front panel by the tabs on the both sides and lift it until it stops with a click. |  | |

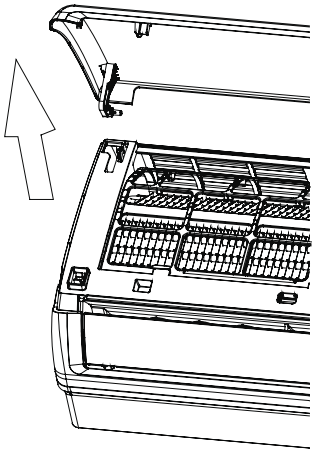
| Step | Procedure | | Points |
|---|---|---|---|
| 2 | Lift an air filter upwards slightly and then pull it out downwards. |  <br>  <br>  | ■ Please embed the air filters into the unit along the grooves as installation.<br>■ Please embed the two hooks on air filter completely into the unit during installation. |

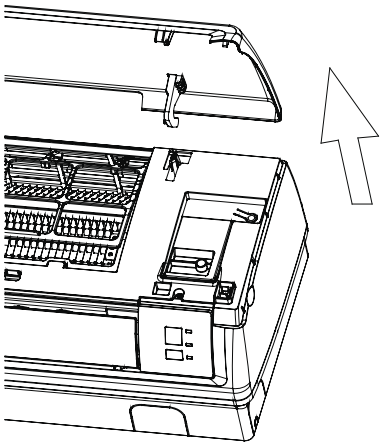
Procedure

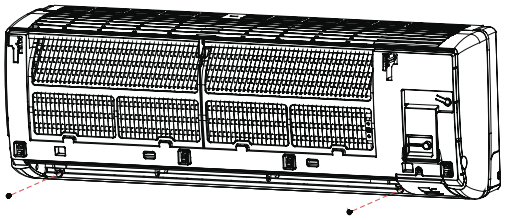
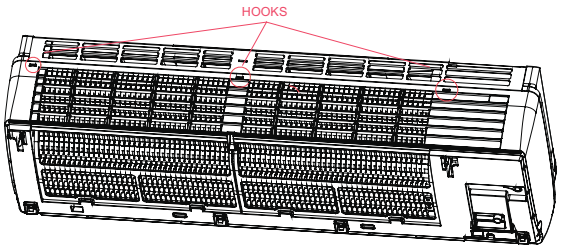
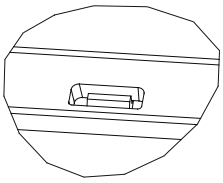
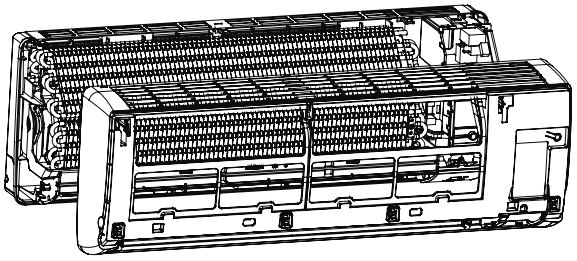
Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

| Step | Procedure | Points |
|---|---|---|
| 1. Remove the front panel. | | |
| 1 | Open the front panel until it is on the horizontal position, and then release the pivots on both sides of the unit to remove the front panel. | ■ Please close the panels before start the removal procedure of front grille.<br>■ Slide the front panel from one side to another to release each axis.<br>■ When assembling, align the right and left axes with grooves in turn and insert them to the end. |



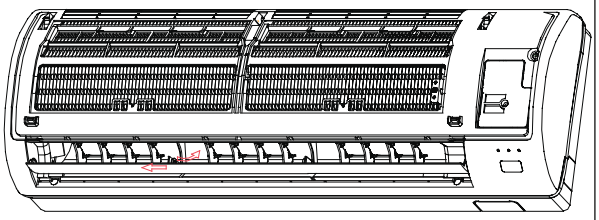
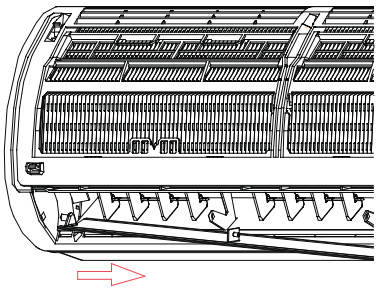
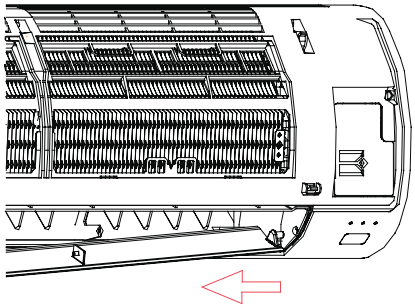




| Step | Procedure | | Points |
|---|---|---|---|
| 2 | Loosen the marked two screws |  | |
| 3 | Release the marked three hooks. |  | |
| | |  | |
| 4 | Pull the front grille out horizontally and remove it. |  | ■ When assembling, install the front grille horizontally so as not to stuff the flap inside.<br>■ When assembling, make sure the three hooks are caught properly. |

Procedure

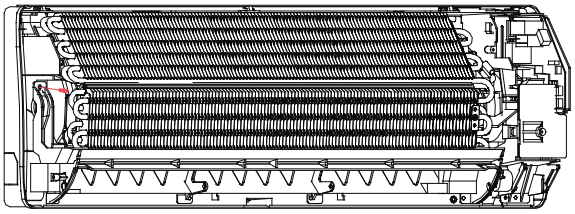
Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

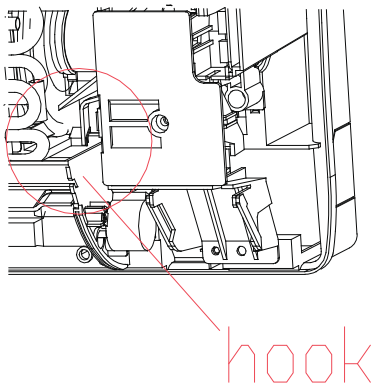
| Step | Procedure | Points |
|---|---|---|
| 1. Remove the horizontal | | ■ The horizontal flap is single. |
| 1 Release the center pivot. |   | ■ Installation procedure<br>1. Since key pattern hook is provided, rotate the flap and fit it to the left pivot first.<br>2. Fit the flap to the right pivot.<br>3. Fit the flap to the center pivot. |
| 2 Bend the horizontal blade slightly and remove it. |  | |

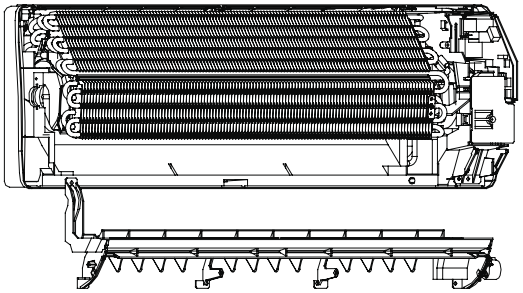
Procedure

Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

| Step | Procedure | Points |
|---|---|---|
| 1. Remove the Drain pan | | |
| 1 | Loosen the marked screws under the screw covers | |
| 2 | Lift up the lower part of the grille to release the hook on the upper backside. | |
| 3 | Rotate the upper part of the grille to release the hook on the lower back side.<br>Pull out the drain pan | |



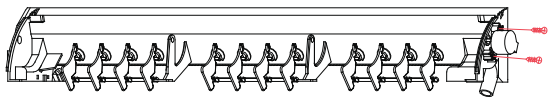


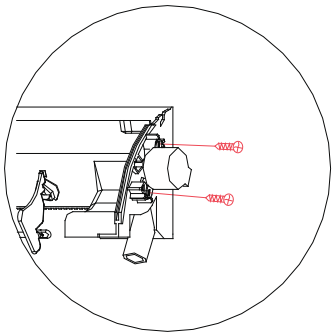



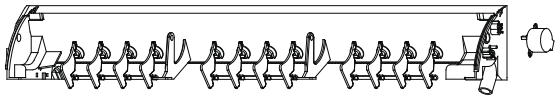
Procedure

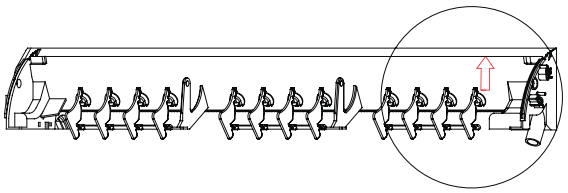
Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

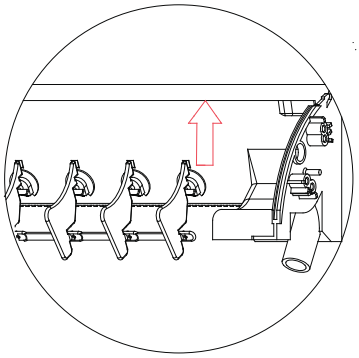
| Step | Procedure | Points |
|---|---|---|
| ■ Remove the assembly of the outlet grille. | | |
| 1. Remove the vertical blades. | | |
| 1 | Push the hooks on the back of the vertical blades and remove. | |

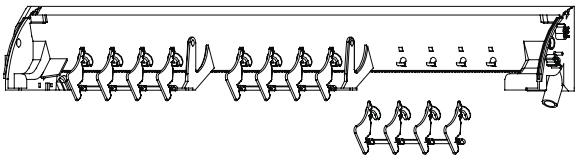






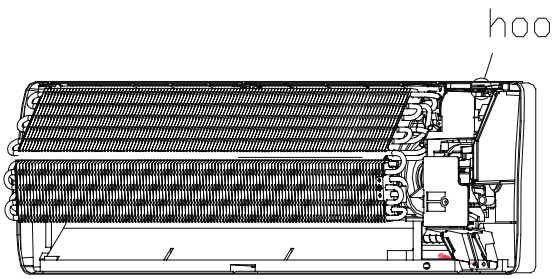
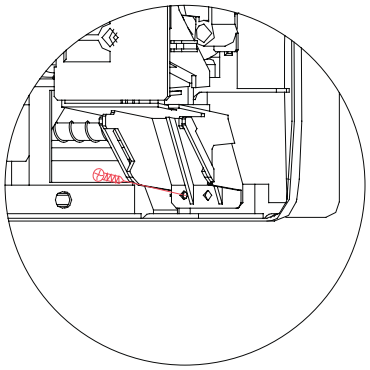
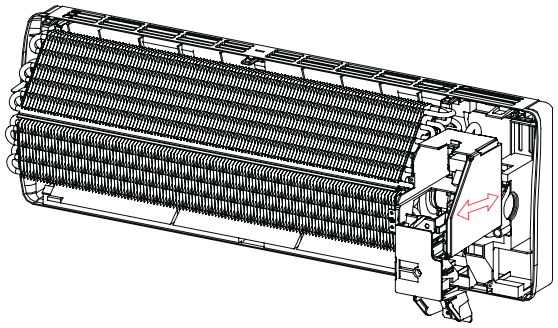






Procedure

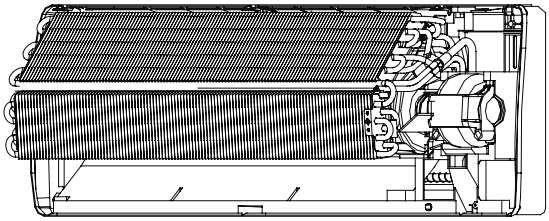
Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

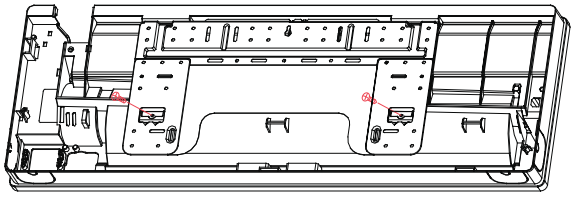
| Step | Procedure | Points |
|---|---|---|
| ■ Remove the front grille. | | ■ Discharge the static electricity from your body before touching the electrical parts like signal receiver PCB. It may cause malfunction of PCB. |
| 1. Remove the electrical box. | | |
| 1 Loosen the screw of the drip proof plate. |   | |
| 2 Lift and remove the electrical box. |  | ■ When assembling, insert the left hook of the drip proof plate into the hem plate of the heat exchanger. |

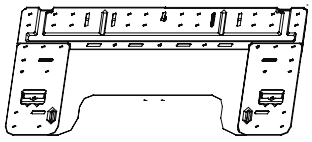
Procedure

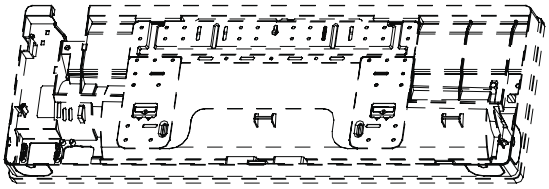
Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

| Step | Procedure | Points |
|---|---|---|
| | | ■ You can detach the indoor unit without removing the assembly of the outlet grille. |
| 1 | Loosen the screws fixed to the installation plate. | Caution<br>If gas leaks, repair the spot of leaking, then collect all refrigerant from the unit. After conducting vacuum drying, recharge proper amount of refrigerant. |
| 2 | Loosen the marked hooks | Caution<br>Do not contaminate any gas (including air) other than the specified refrigerant (R410A), into refrigerant cycle. (Contaminating of air or other gas causes abnormal high pressure in refrigerating cycle, and this results in pipe breakage or personal injuries.) |
| 3 | Loosen the marked screws and remove mounting plate | ■ Pay attention so that the residual water in the drain will not make the floor wet.<br>■ In case that a drain hose is buried inside a wall, remove it after the drain hose in the wall is pulled out.<br>■ Use two wrenches to disconnect pipes.<br>■ When disconnecting pipes, cover every nozzle with caps so as not to let dust and moisture in. |

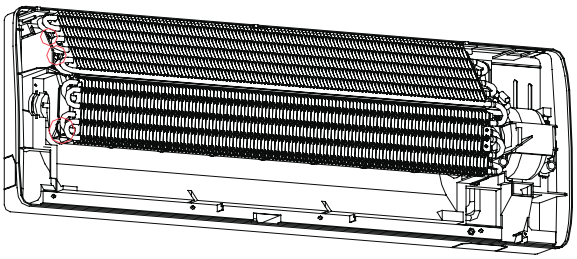


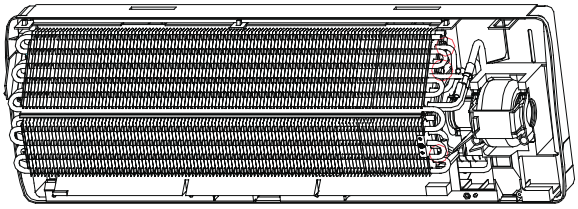


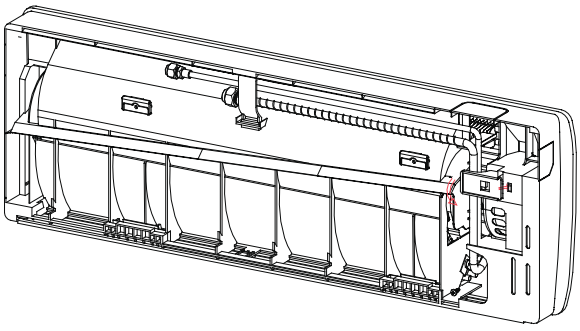


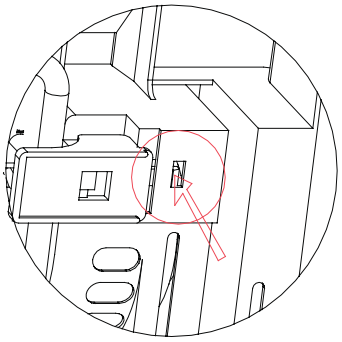


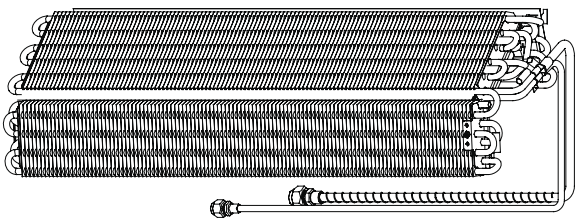
| Step | Procedure | Points |
|---|---|---|
| 1 | Release the hooks | |
| 2 | Release the hook from the back side.<br>Lift up the lower part of the fixture plate and remove it. | |
| 6 | Remove the heat exchanger | |

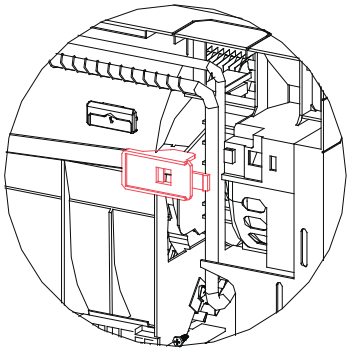








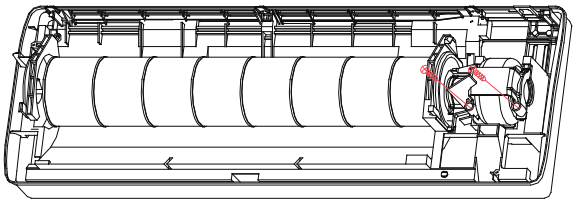


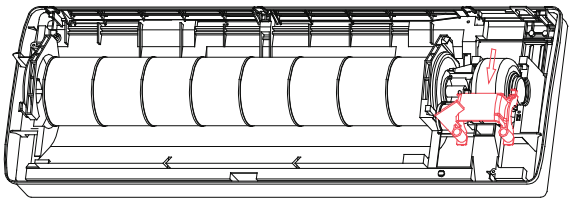


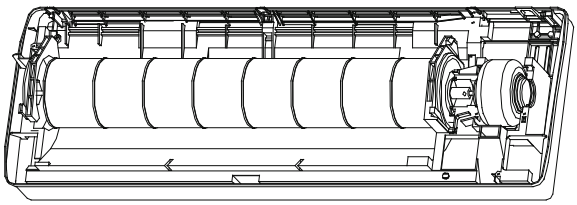
Procedure

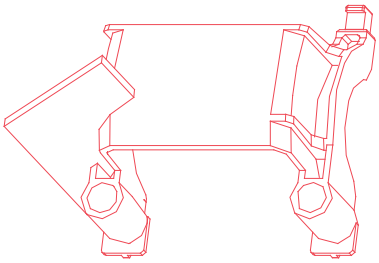
Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

| Step | Procedure | Points |
|---|---|---|
| 1. | Remove the right side plate. | |
| 1 | Loosen the 2 screws. | |
| 2 | Remove the fixing plate. | |

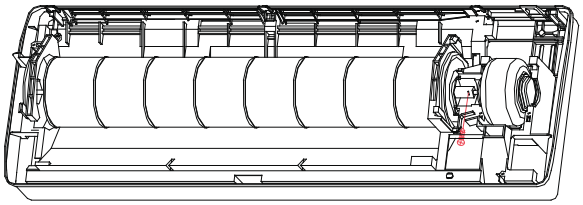


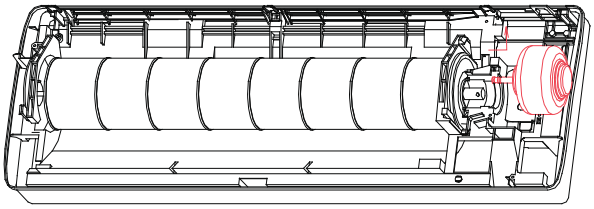


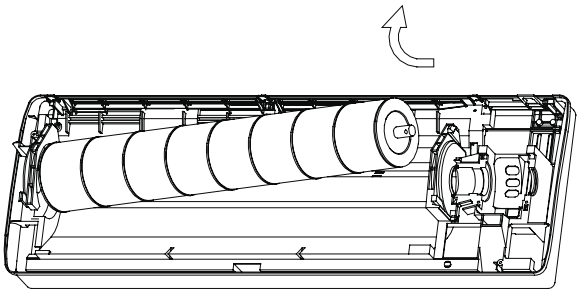


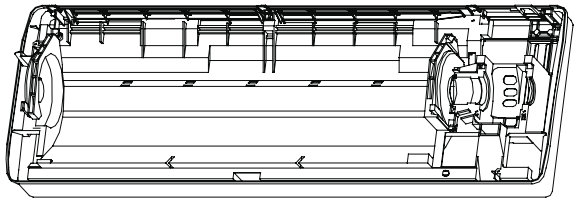


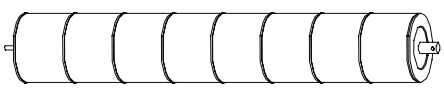
| Step | Procedure | Points |
|---|---|---|
| 3. Remove the fan. | | |
| 1 | Loosen the marked screw. | |
| 2 | Lift up the right part of the fan motor and slide it to the rightward to remove. | |
| 3 | Lift up the right part of the fan and remove it | |









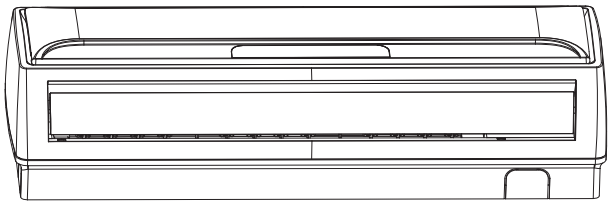
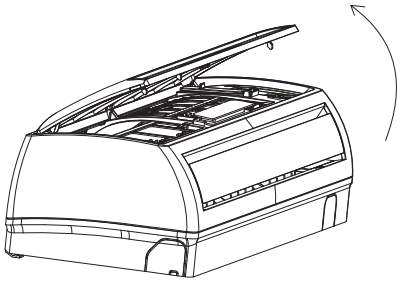
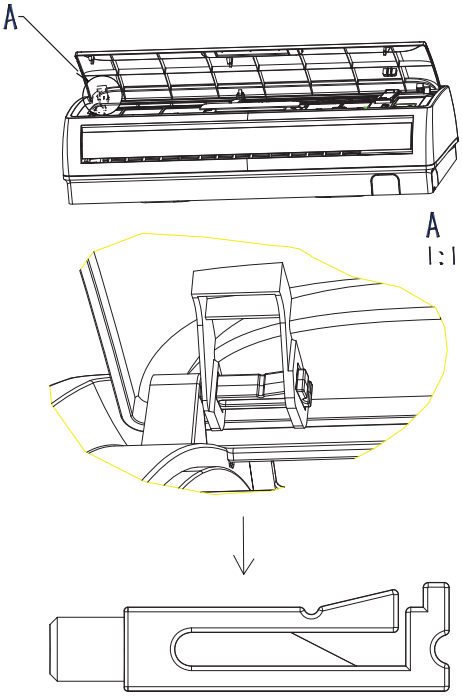


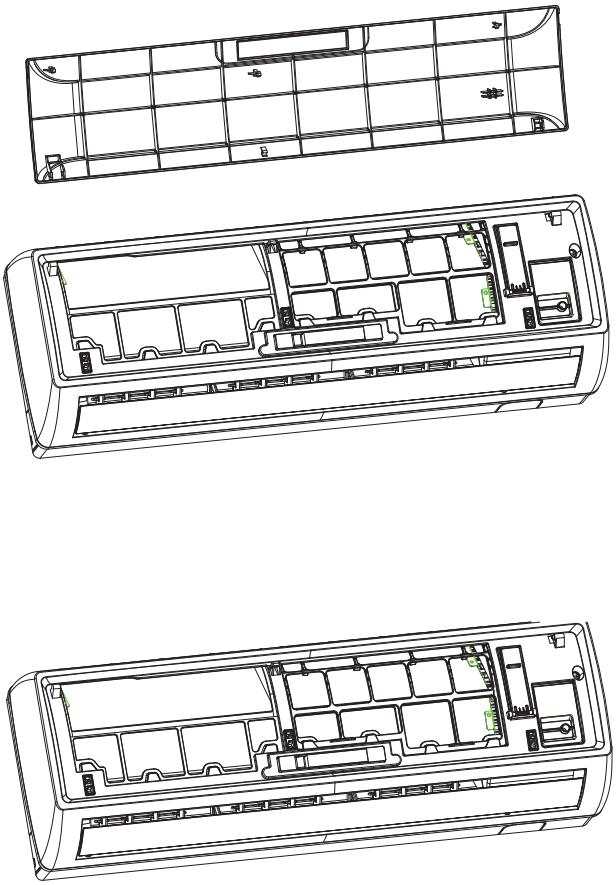
# 9.2 The removal procedure of Indoor unit HSM18HRAC03/R2(DB)

## 9.2.1 Removal of Front Panel

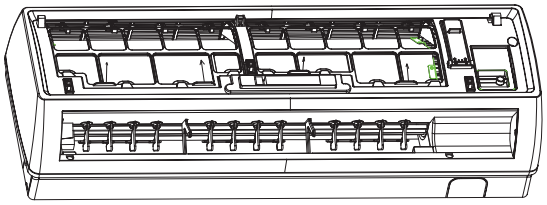
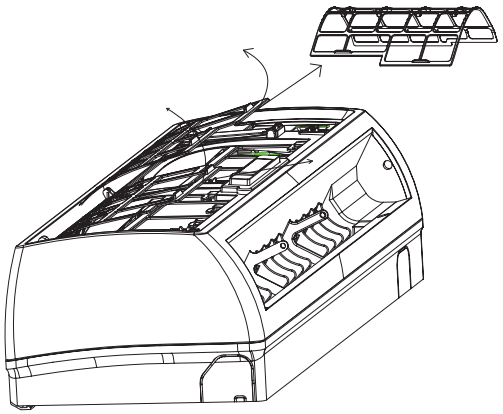
Procedure

Warning Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.

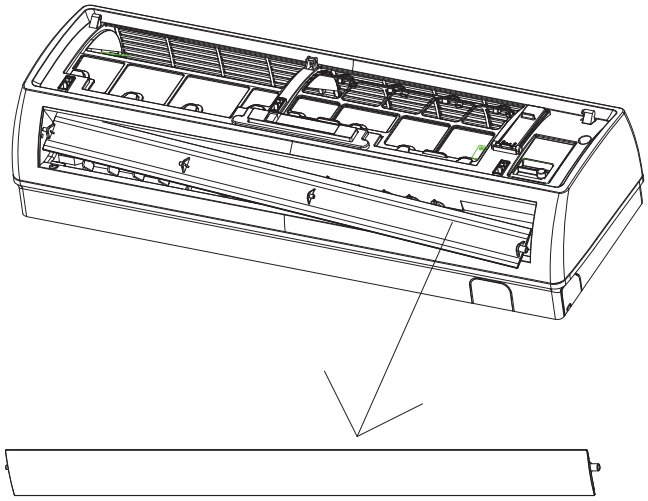
| Step | Procedure | Points |
|---|---|---|
| 1. Features |  | |
| 2. Remove the front panel | | |
| 1 Hold the front panel by the tabs on the both sides and lift it until it stops with a click. |  | |
| 2 Open the front panel to the horizontal position. Release the both sides pivots and remove the front panel. |   | When assembling, align the right and left axes with grooves in turn and insert them to the end. |

| Step | Procedure | | Points |
|---|---|---|---|
| 3 | Pull the front panel out horizontally and remove it. |  | |

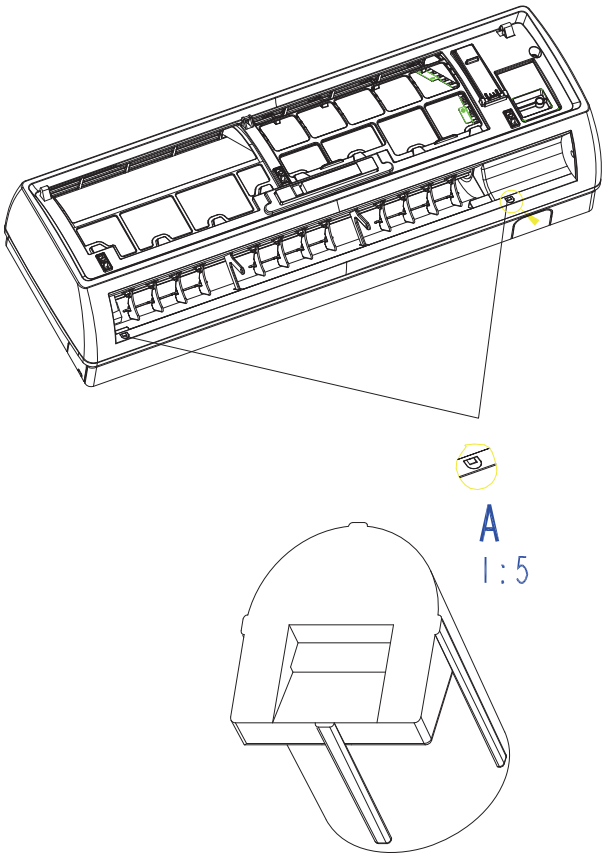
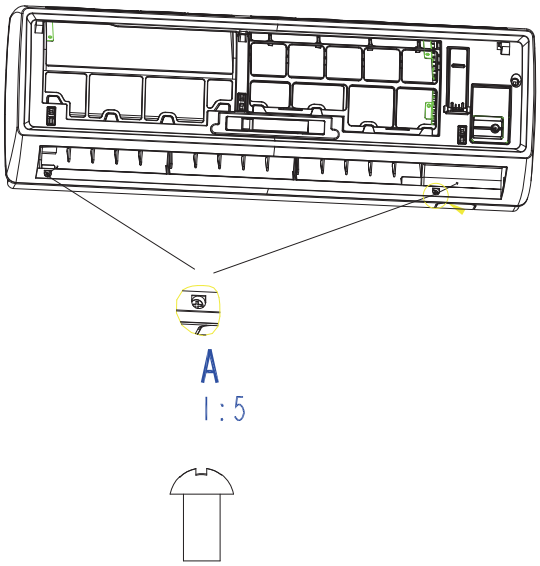
## 9.2.2 Removal of Air Filter

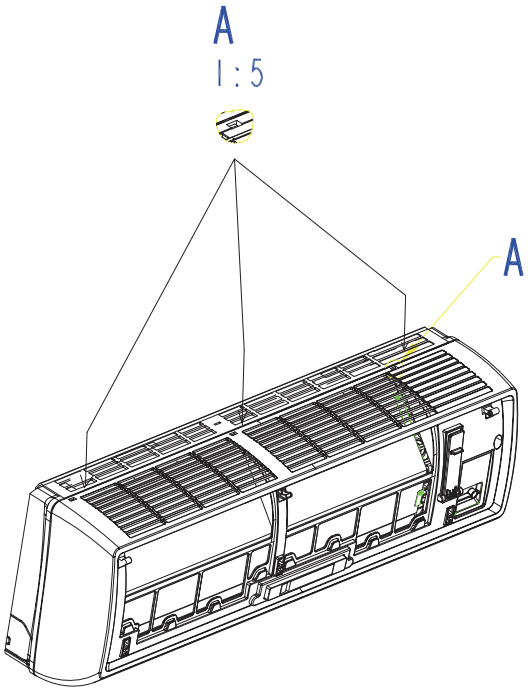
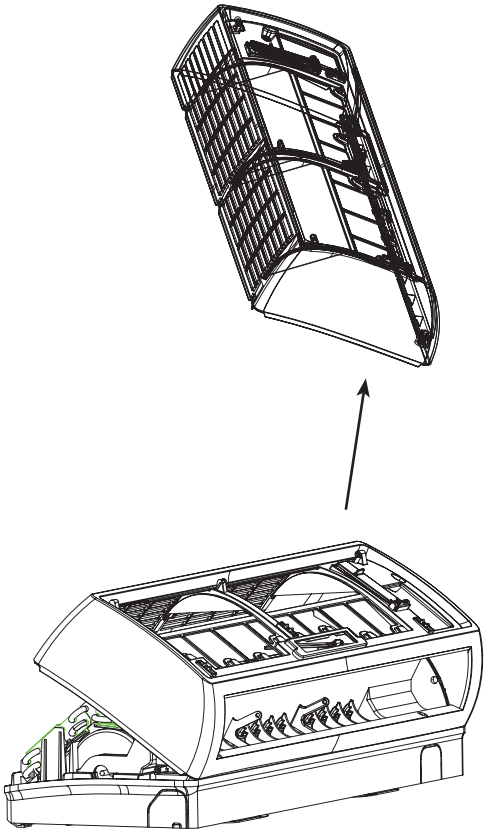
| Step | Procedure | | Points |
|---|---|---|---|
| | Lift an air filter upwards slightly and then pull it out downwards. |   | ■ Insert the air filters along grooves when installing.<br>■ When installing, insert 2 hooks of the air filter completely. |

## 9.2.3 Removal of the blade

| Step | Procedure | | Points |
|---|---|---|---|
| | Release the marked hooks. Pull out and remove the blade. |  | ■ Insert the air filters along grooves when installing.<br>■ When installing, insert 2 hooks of the air filter completely. |

## 9.2.4 Removal of Front Case

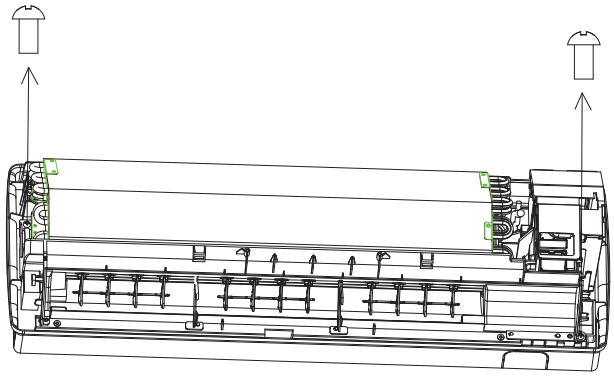
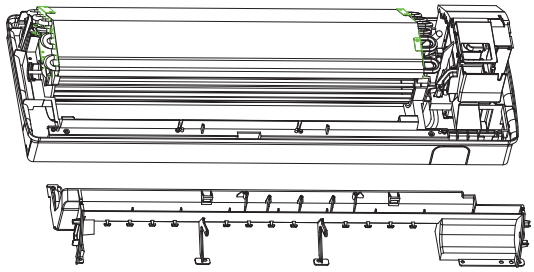
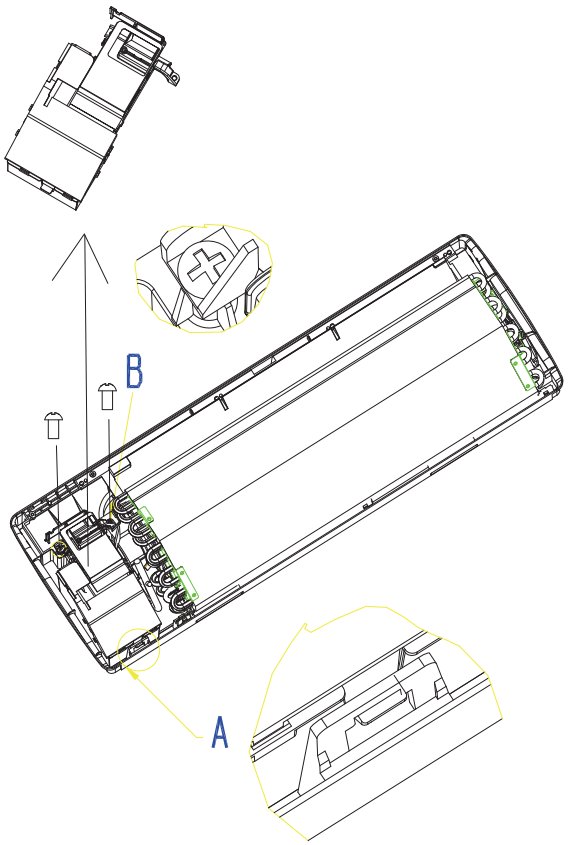
| Step | Procedure | | Points |
|---|---|---|---|
| 1 | Release the screw covers |  | |
| 2 | Loosen the 2 fixing screws. |  | |

| Step | Procedure | | Points |
|---|---|---|---|
| 3 | Loosen the marked hooks. |  | |
| 4 | Pull out the front case. |  | |

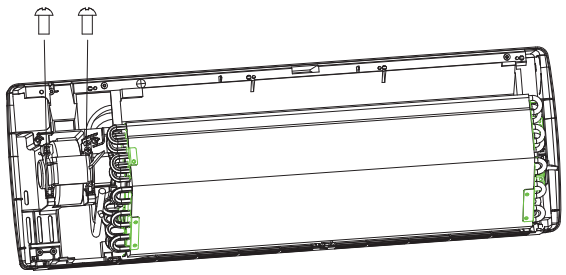
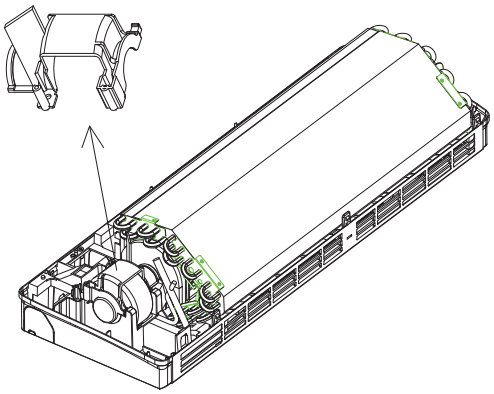
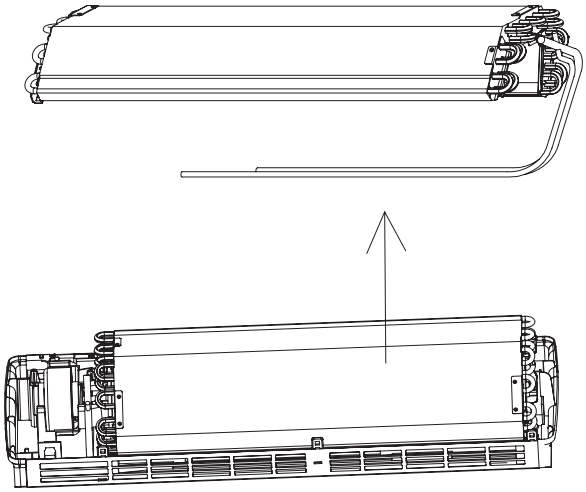
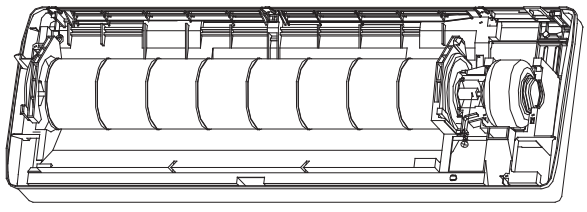
## 9.2.5 Removal of Vertical Blades and Display Board

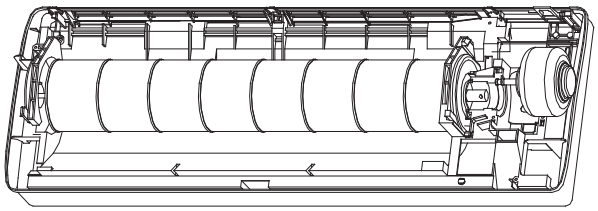
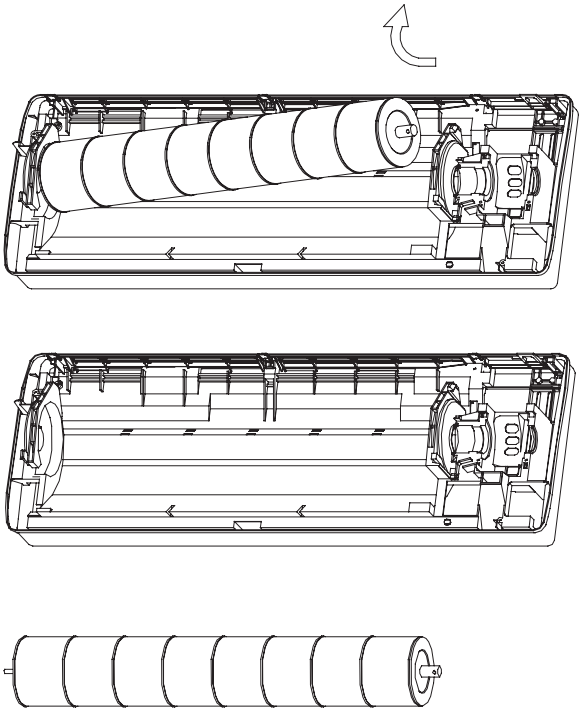
| Step | Procedure | Points |
|---|---|---|
| | | |
| 1 | Pull out the Vertical Blades. | |
| 2 | Loosen the 2 fixing screws,and remove the display board. | |
| 3 | Loosen the screw of the drip proof plate. Lift and remove the electrical box. | |

## 9.2.6 Removal of Fan Drain pan and Electrical Box

| Step | Procedure | | Points |
|---|---|---|---|
| 1 | Loosen the 2 screws. |  | |
| 2 | Pull out the drain pan. |  | |
| 3 | Loosen the screw of the drip proof plate. Lift and remove the electrical box. |  | ■ Discharge the static electricity from your body before touching the electrical parts like signal receiver PCB.<br>■ It may cause the malfunction of PCB. |

## 9.2.7 Removal of Fan Motor and Heat Exchanger

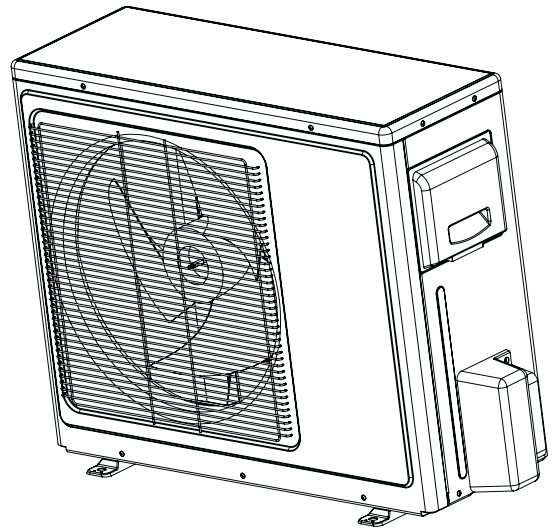
| Step | Procedure | Points |
|---|---|---|
| 1. Remove the right side plate. |  | |
| 1 Loosen the 2 screws. | | |
| 2 Remove the fixing plate. |  | |
| 3 Lift up the evaporator |  | Be careful not to cut your finger by the fins of the evaporator. |
| 3. Remove the fan. |  | |
| 1 Loosen the 2 screws. | | |

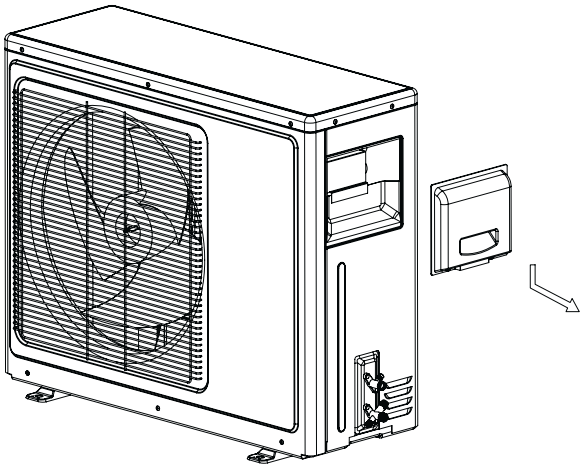
| Step | Procedure | | Points |
|---|---|---|---|
| 2 | Lift up the right part of the fan motor and slide it to the rightward to remove. |  | |
| 3 | Lift up the right part of the fan and remove it |  | |

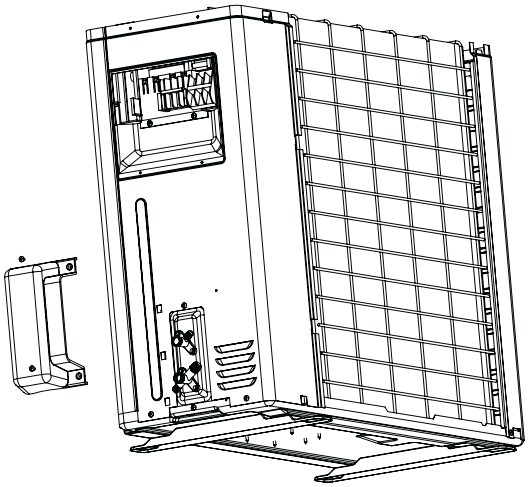
# 9.3 The removal procedure of outdoor

## 9.3.1 Removal of Outdoor panel

| Step | Procedure | Points |
|---|---|---|
| 1. Features | | |
| 1 | Loosen the service cover screw and remove the service cover. | Be careful not to cut your finger by the fins of the heat exchanger. |

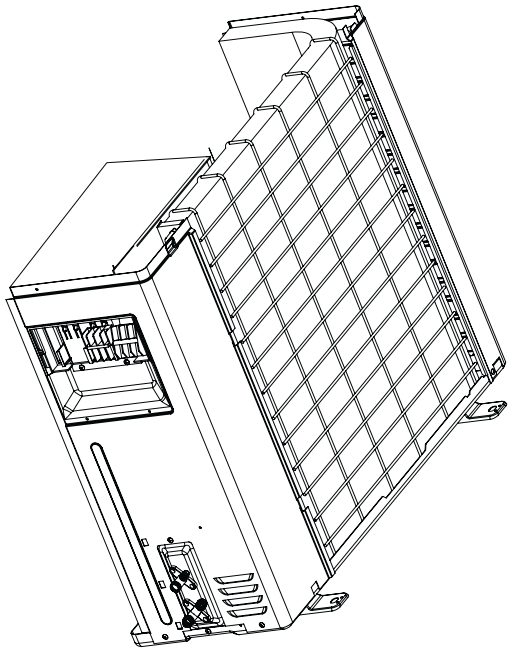
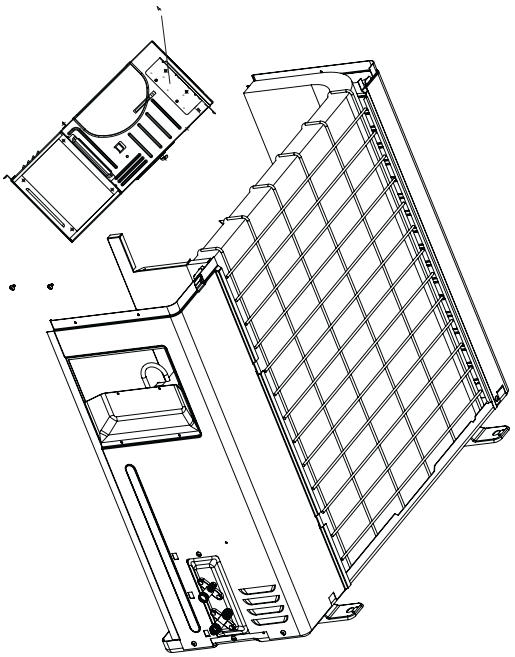




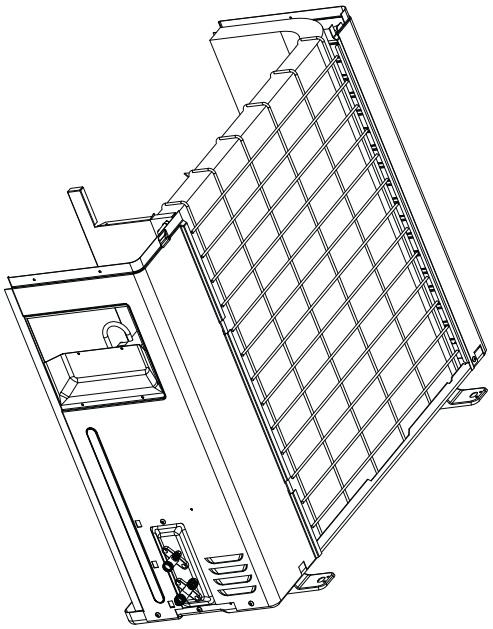
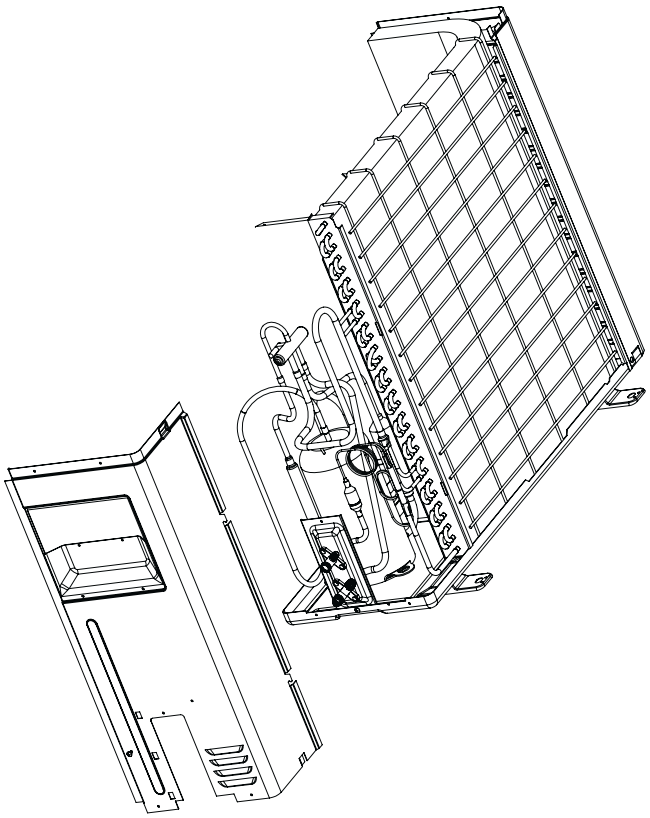


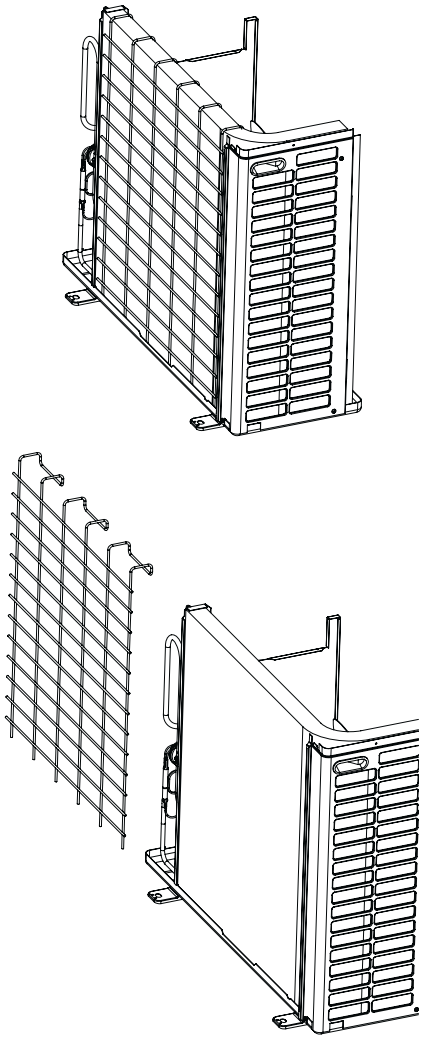
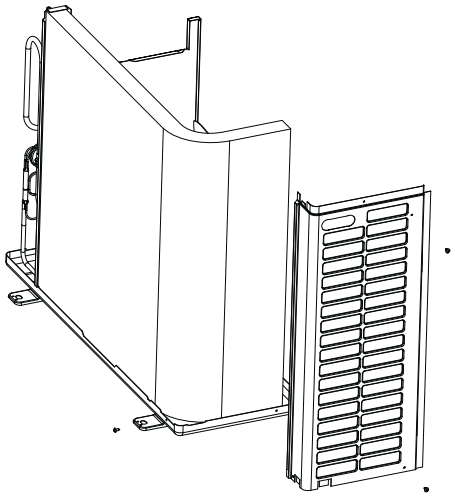
| Step | Procedure | Points |
|---|---|---|
| 2. Remove the panels. | | |
| 1 | Loosen the 4 screws and lift the top panel | |
| 2 | Loosen the screws of the panel. | |
| 3 | Pull and remove the front panel. | |

## 9.3.2 Romoval of Electrcal Box

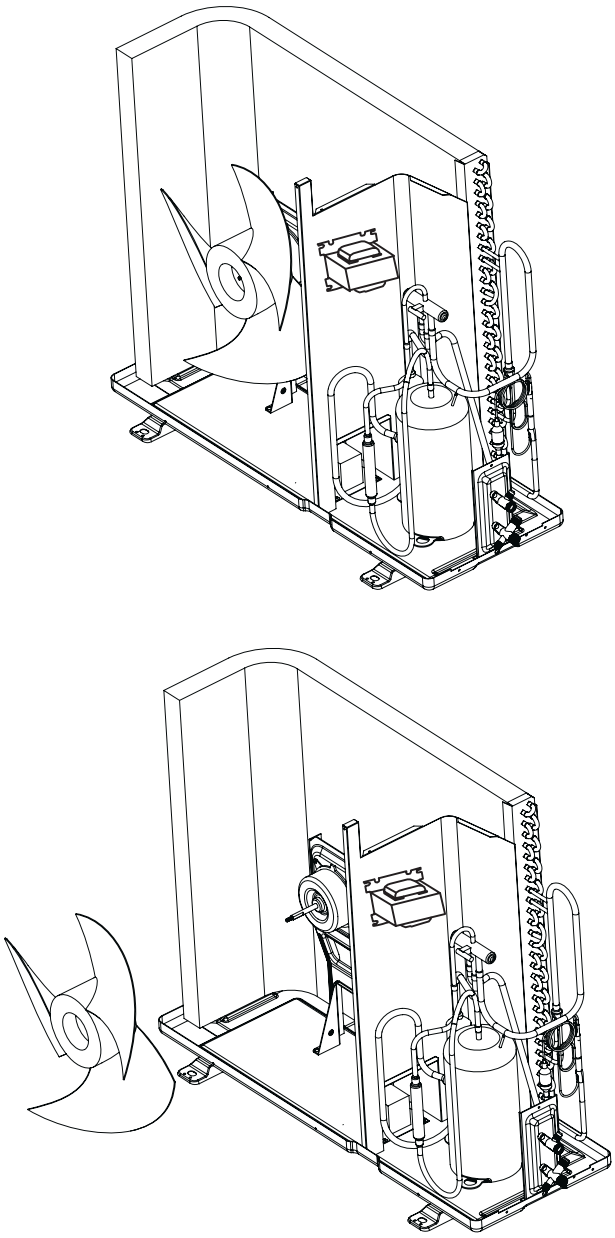
| Step | Procedure | | Points |
|---|---|---|---|
| | Remove the fixing screws, then lift the electrical box |   | |

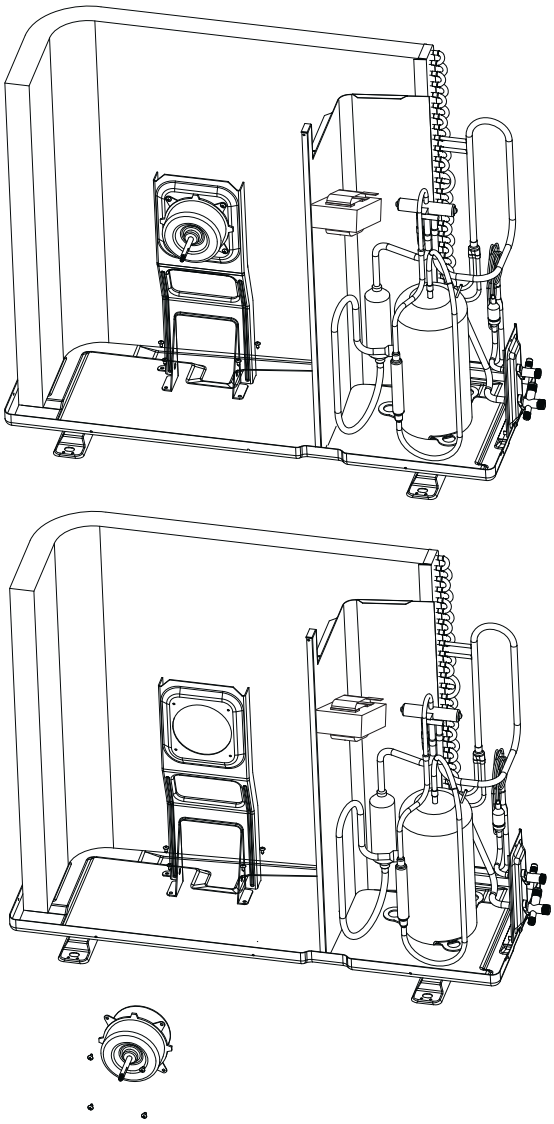
## 9.3.3 Romoval of the Side panel

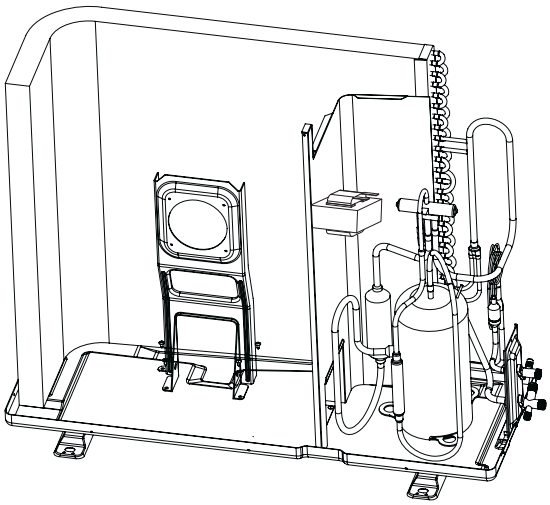
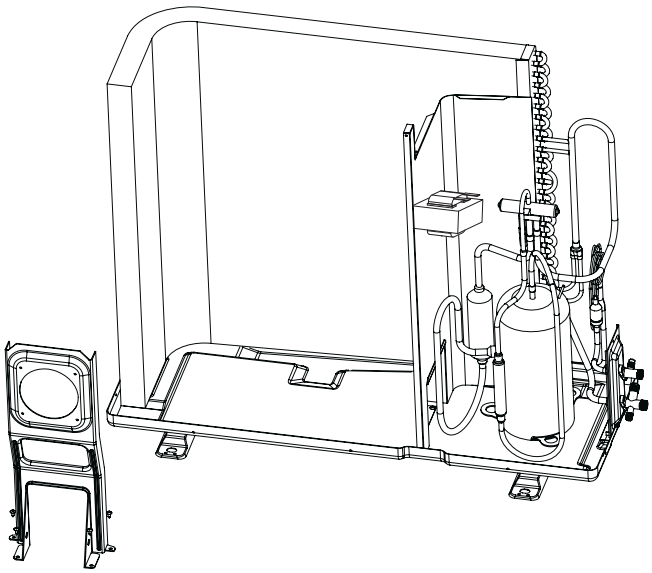
| Step | Procedure | | Points |
|---|---|---|---|
| 1 | Loosen the fixing screws and remove the side panel. |   | |

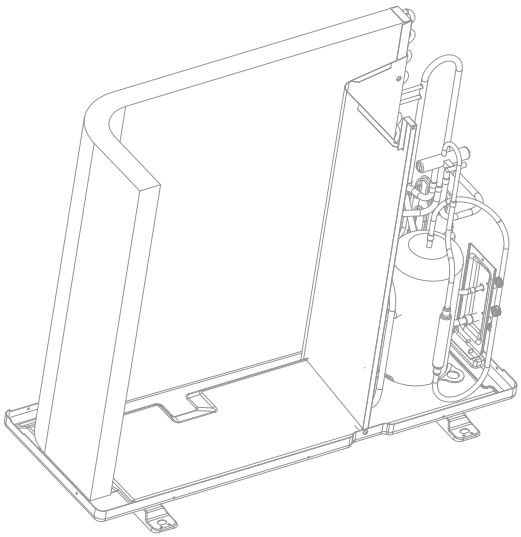
| Step | Procedure | | Points |
|---|---|---|---|
| 2 | Remove the back panel. |  | |
| 3 | Loosen the fixing screws and remove the side panel. |  | |

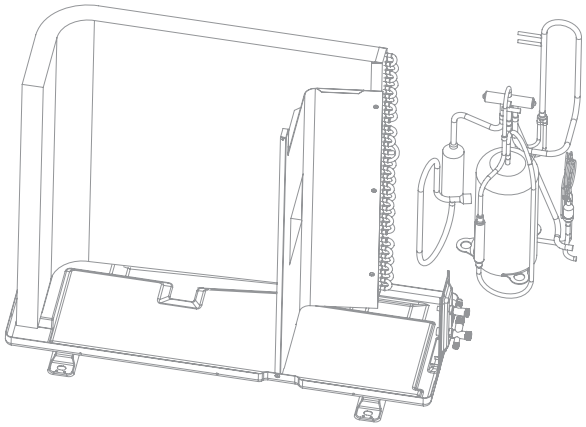
## 9.3.4 Removal of fan and fan motor

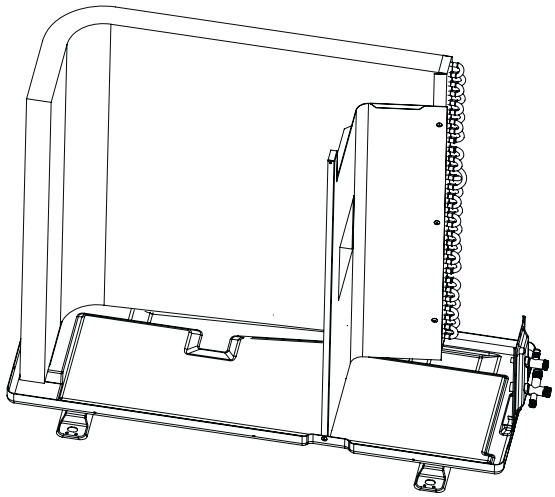
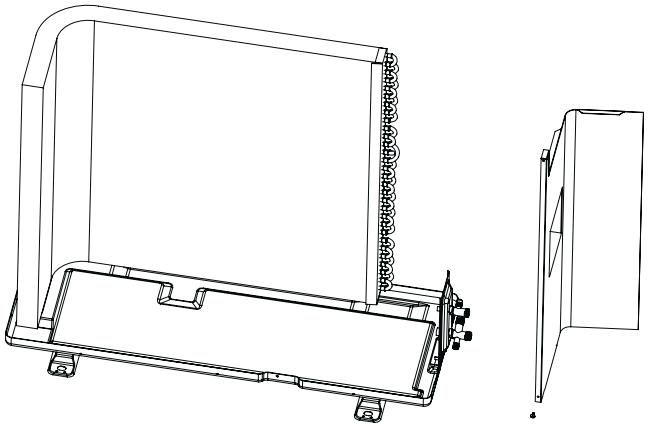
| Step | Procedure | | Points |
|---|---|---|---|
| 1 | Loosen the fixingscrew and remove the fan |  | Put the lead wire throughthe back of motor when assembling. (so as not to entangled with the propeller fan) |

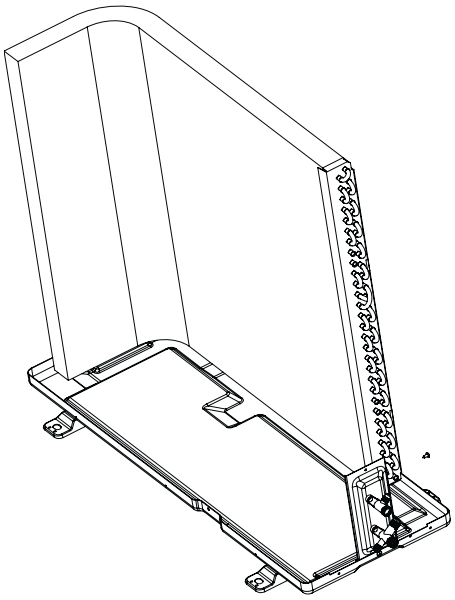
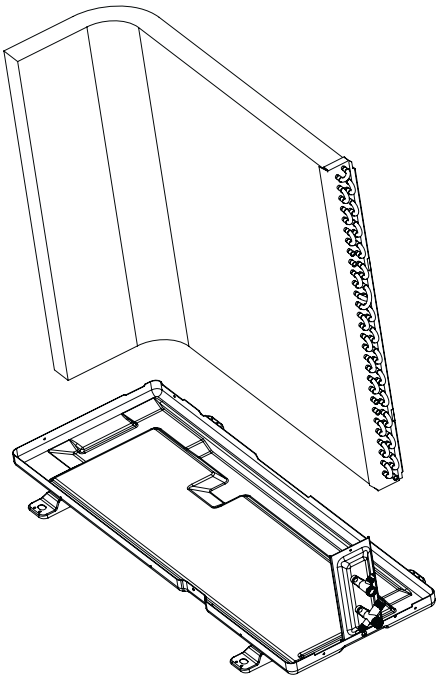
| Step | Procedure | | Points |
|---|---|---|---|
| 2 | Loosen the fixing screws and lift the fan motor. |  | |

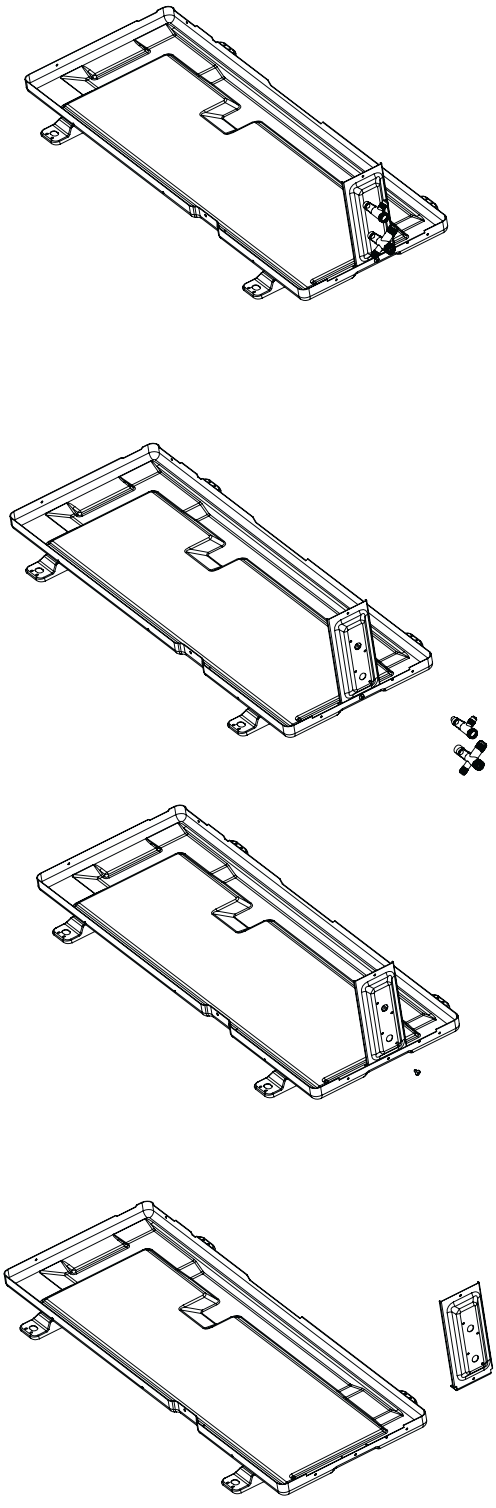
| Step | Procedure | | Points |
|---|---|---|---|
| 3 | Remove the fixing screws, then lift the fan motor bracket |   | |

| Step | Procedure | | Points |
|---|---|---|---|
| 4 | screws, then lift the proof plate. |  | |

| Step | Procedure | | Points |
|---|---|---|---|
| 1 | Cut down the<br><br>and pull out the compressor and remove the |  | |

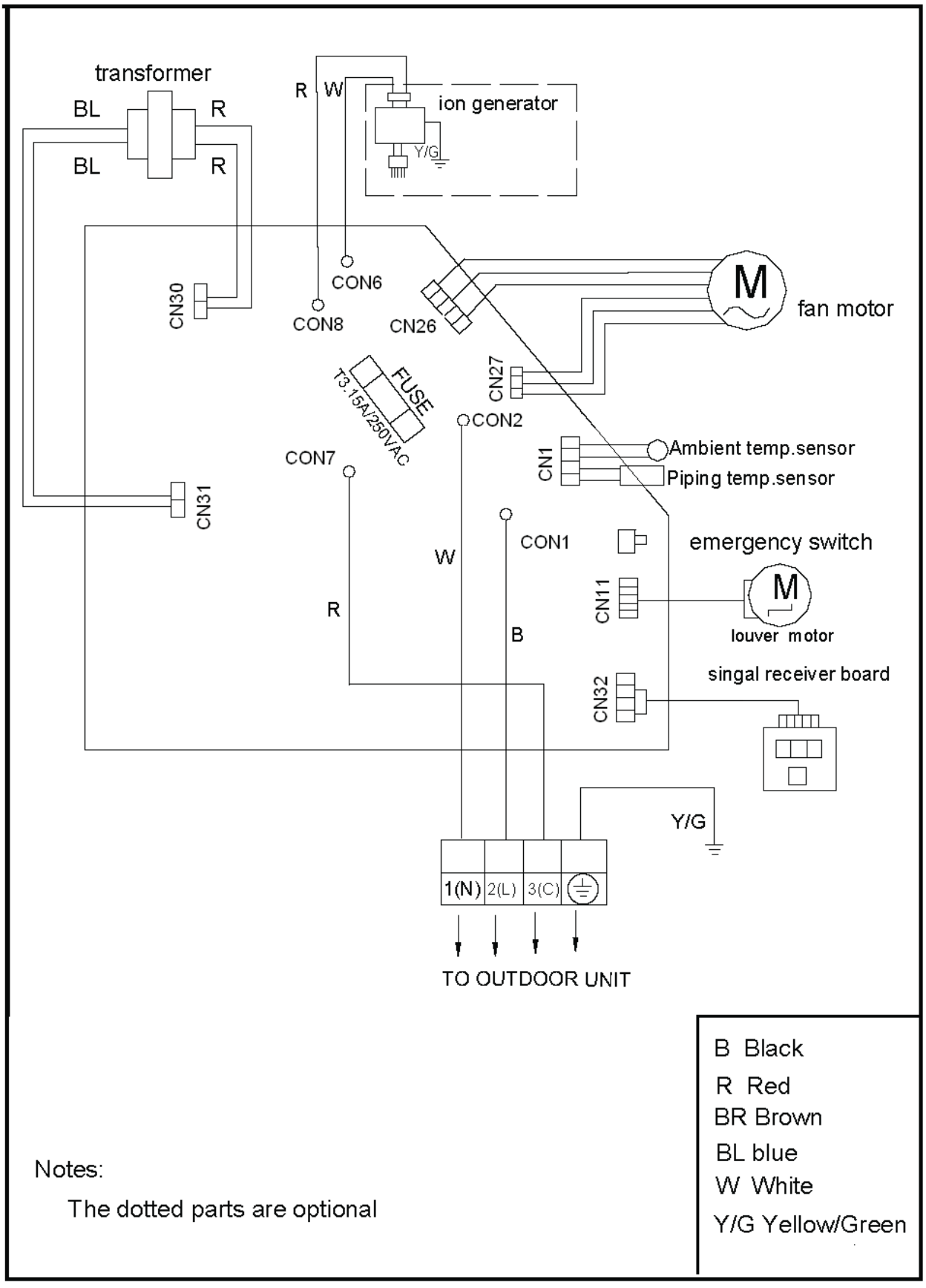
| Step | Procedure | | Points |
|---|---|---|---|
| 2 | Loosen the marked fixing screws |   | |

| Step | Procedure | | Points |
|---|---|---|---|
| 3 | Loosen the fixing hook and remove the heat exchanger |   | |

| Step | Procedure | | Points |
|---|---|---|---|
| 4 | Remove the valve bracket. |  | |

# 10.Wiring Diagrams

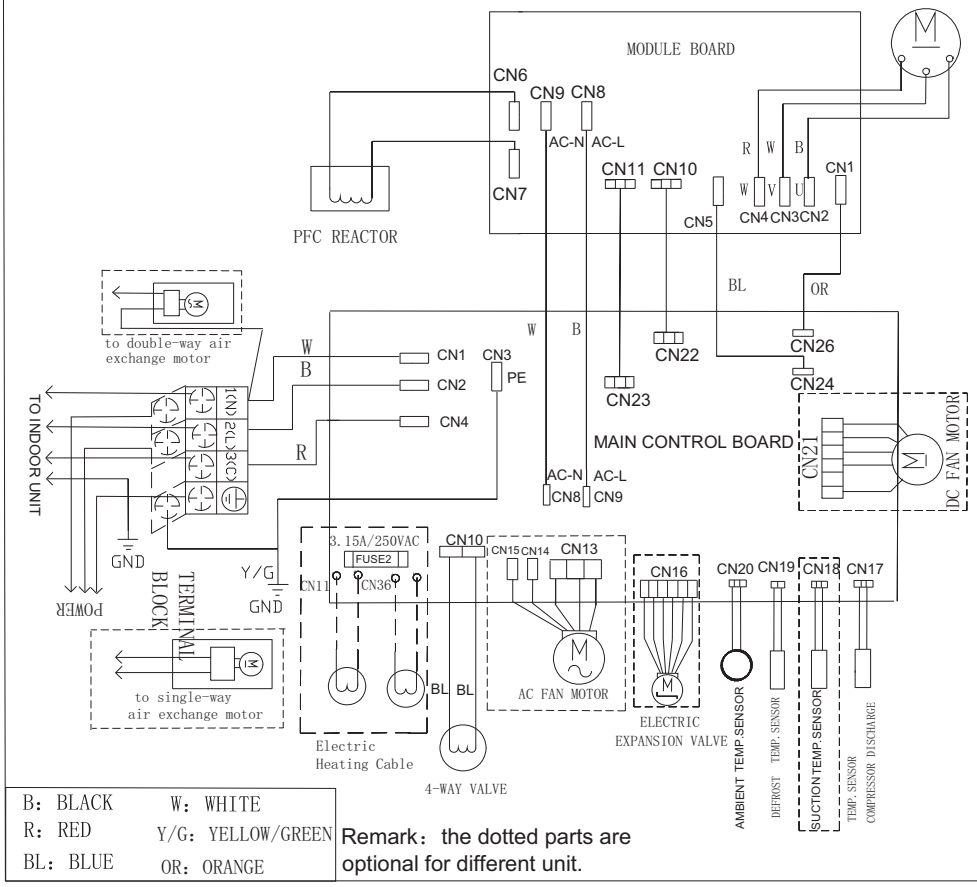
## 10..1. Indoor unit



# 10.2.Outdoor unit

## OUTDOOR WIRING DIAGRAM

0010527905




B: BLACK W: WHITE
R: RED Y/G: YELLOW/GREEN
BL: BLUE OR: ORANGE

Remark: the dotted parts are optional for different unit.

**WARNING**

**CAUTION**

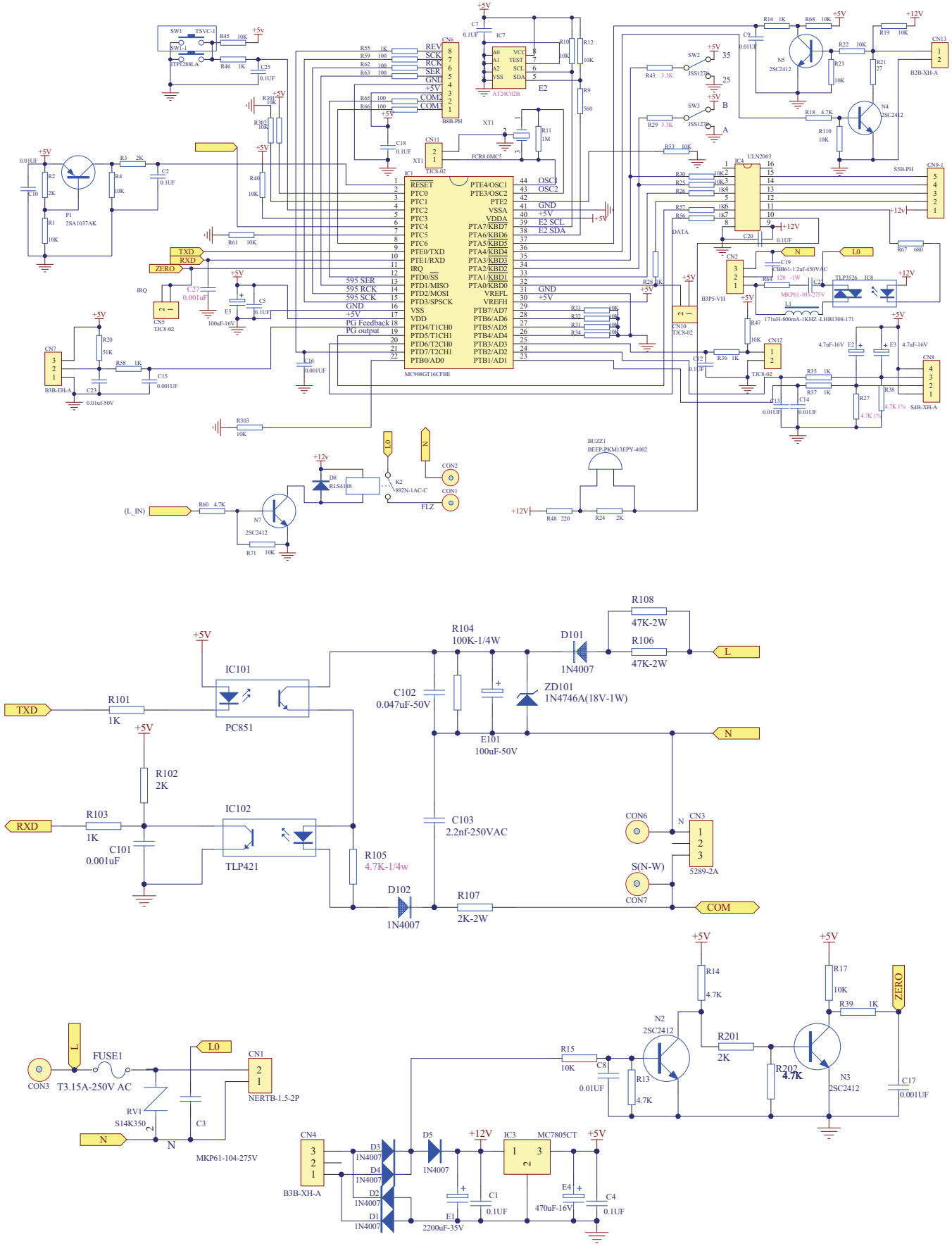
DON'T TOUCH CAPACITOR, EVEN AFTER PLUG-OFF ( DANGER OF ELECTRIC SHOCK)

The capacitor retains high voltage even after the plug-off. For your safety, be sure to wait at least 5 minutes. after plug off and use a tester to confirm the voltage between connector P and N(on module board) is less than DC 10V before start servicing.

| Description | LED1 Flash Times |
|---|---|
| Outdoor EEPROM error | 1 |
| The protection of IPM | 2 |
| Overcurrent protection of AC electricity | 3 |
| Communication fault between the IPM and CBD | 4 |
| Over pressure or Overheat protection for the compressor | 5 |
| Power voltage is too high or low | 6 |
| Overheat protection for exhaust temperature | 8 |
| Frost-removing temperature sensor failure | 10 |
| Ambient temperature sensor failure | 12 |
| Exhaust temperature sensor failure | 13 |
| Deviate from the normal for the compressor | 18 |
| Loop of the station detect error | 19 |
| Overcurrent of the compressor | 24 |
| Overcurrent protection for single-phase of the compressor | 25 |

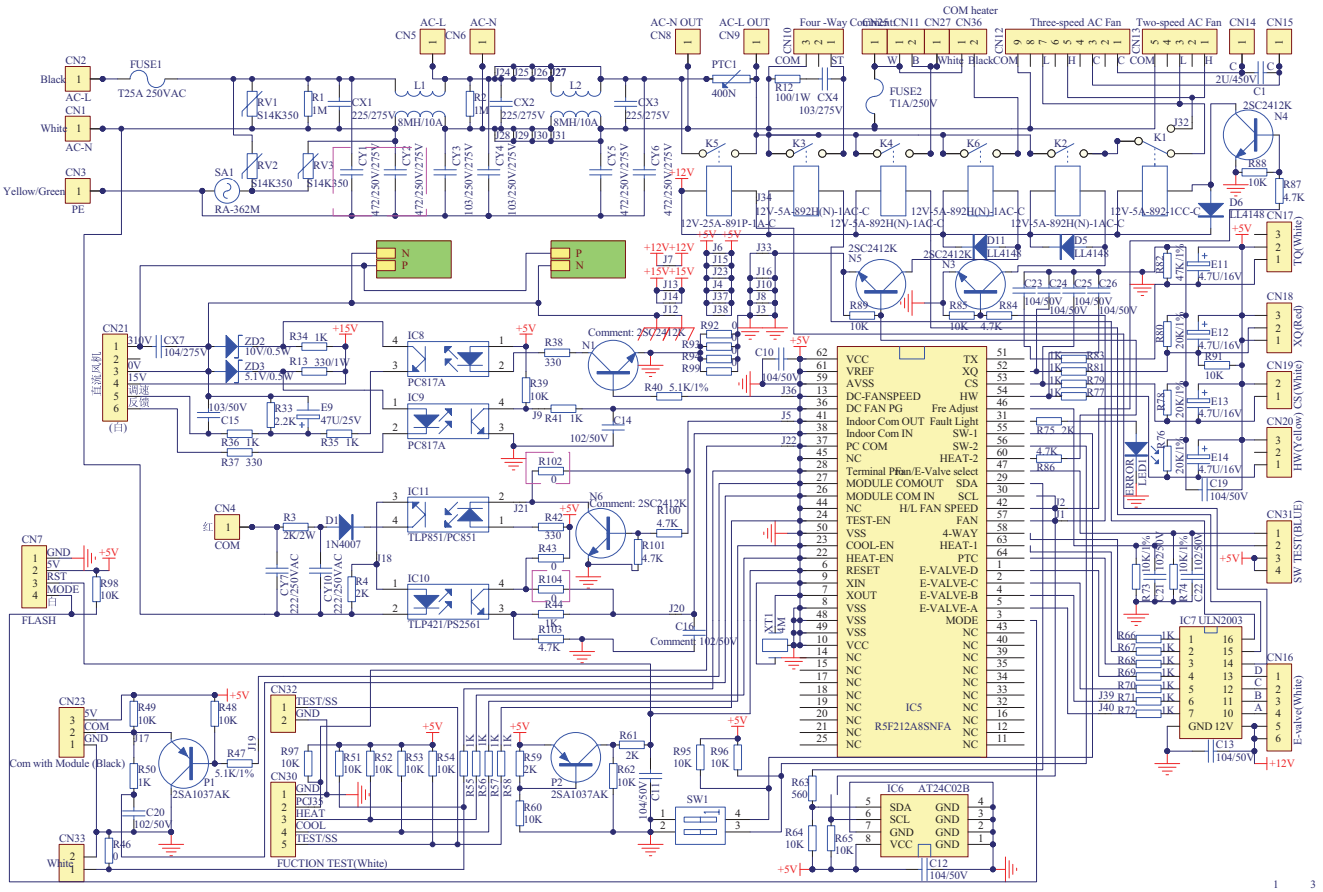
# 11.Circuit Diagrams

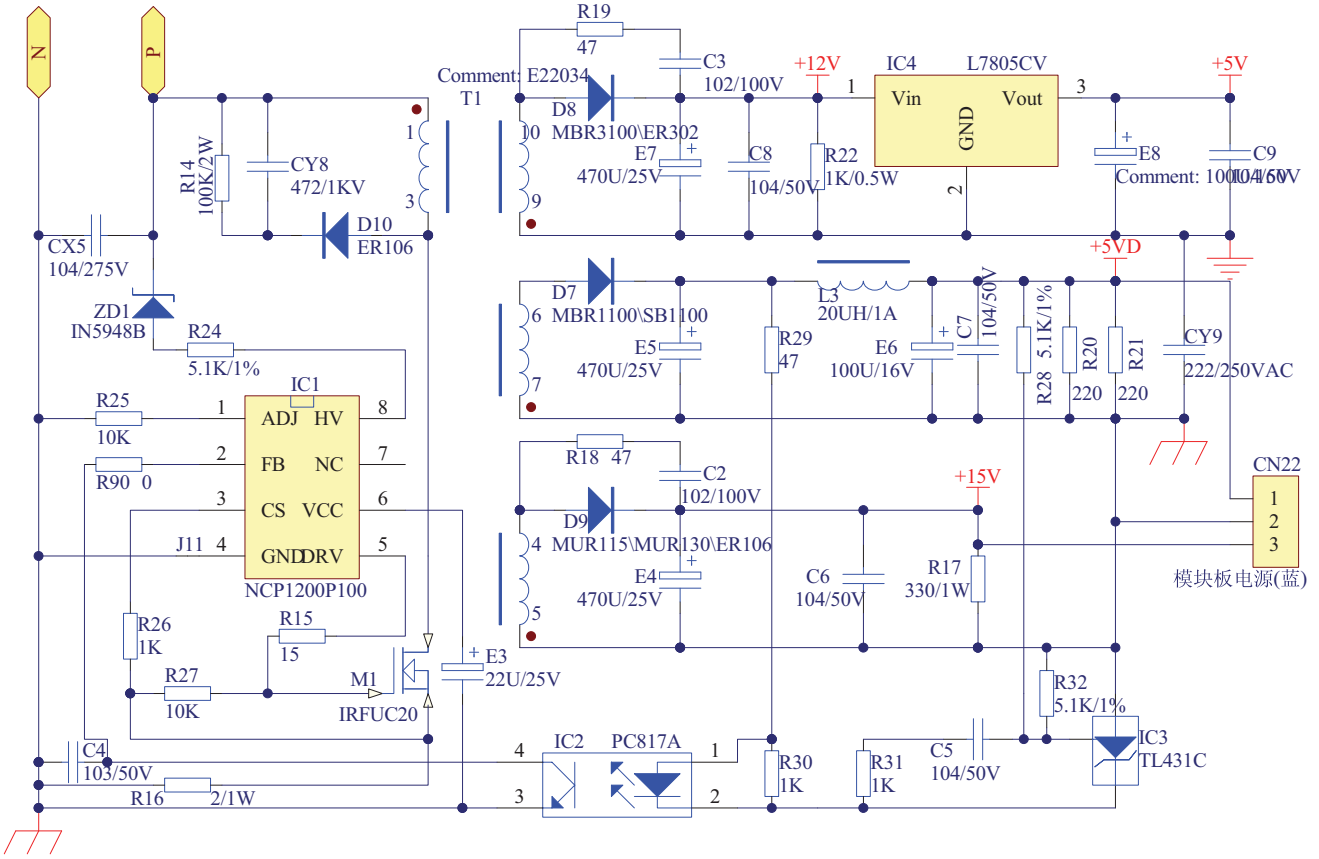
## 11.1.Indoor unit

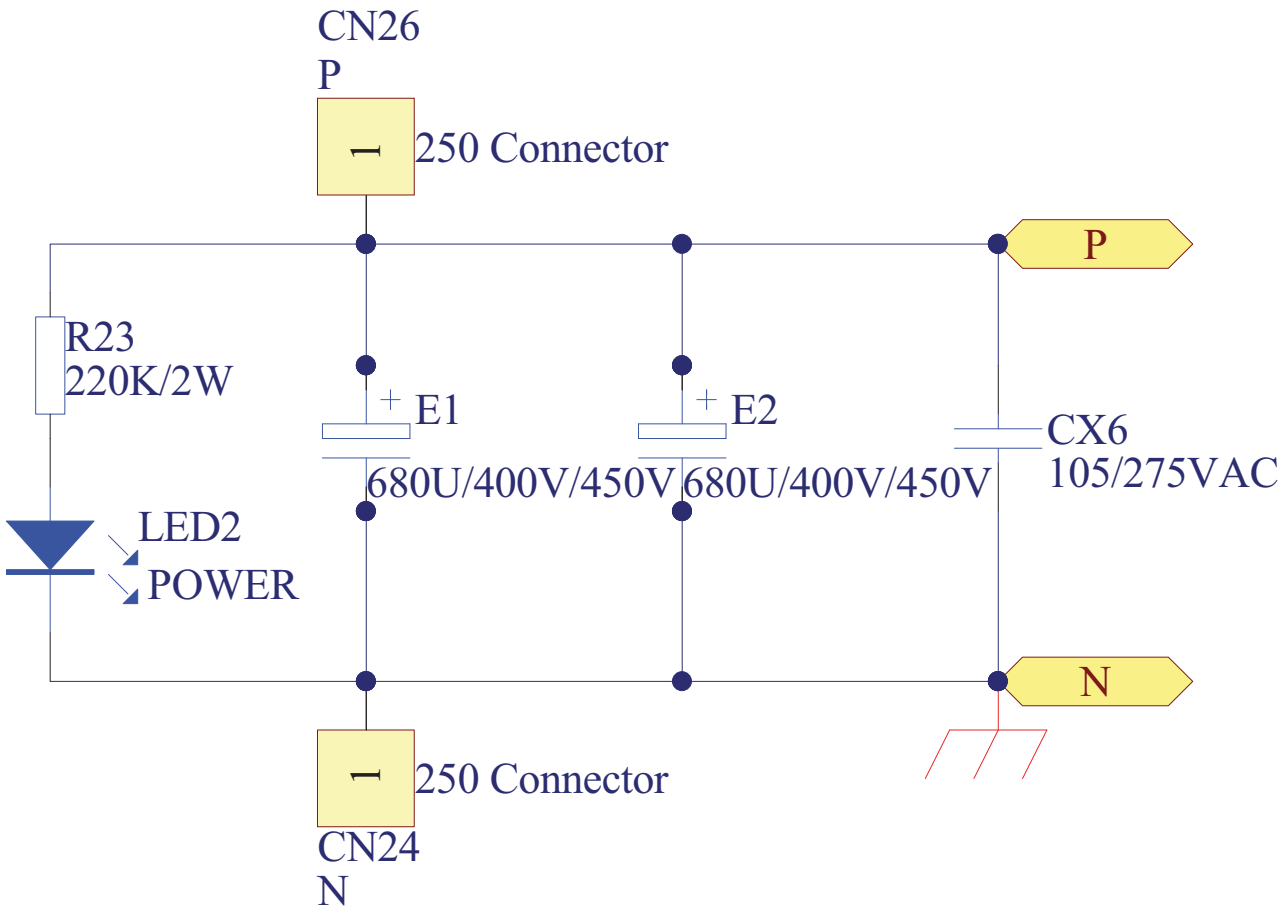


# 11.2.Outdoor unit

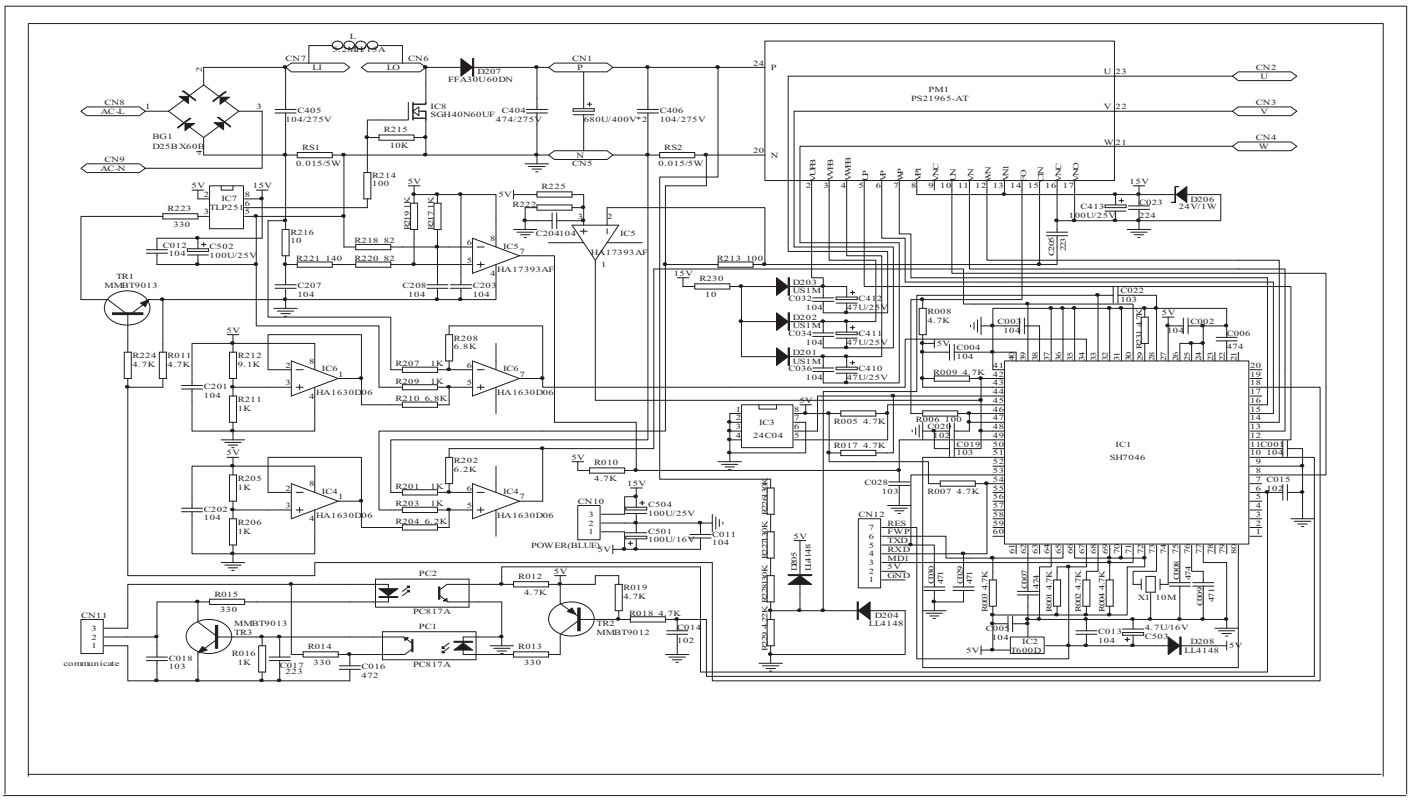
## 11.2.1 Control Board Circuit Diagrams



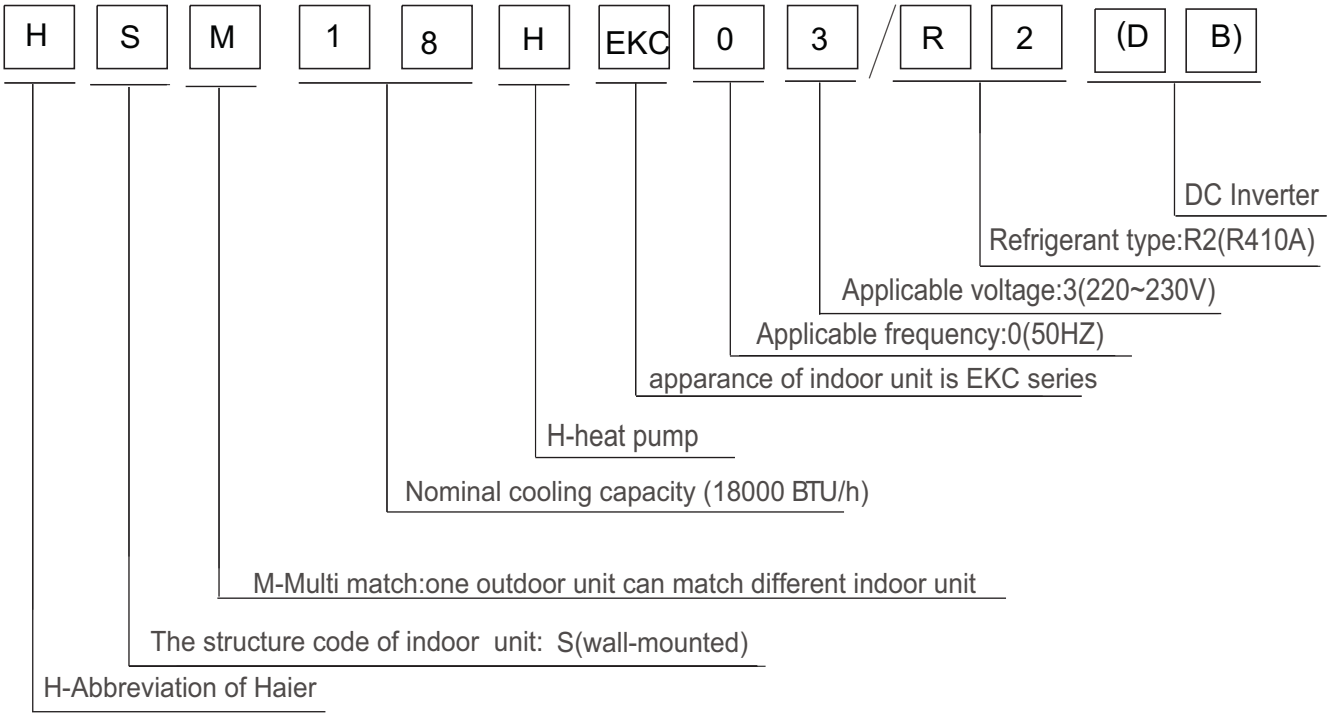





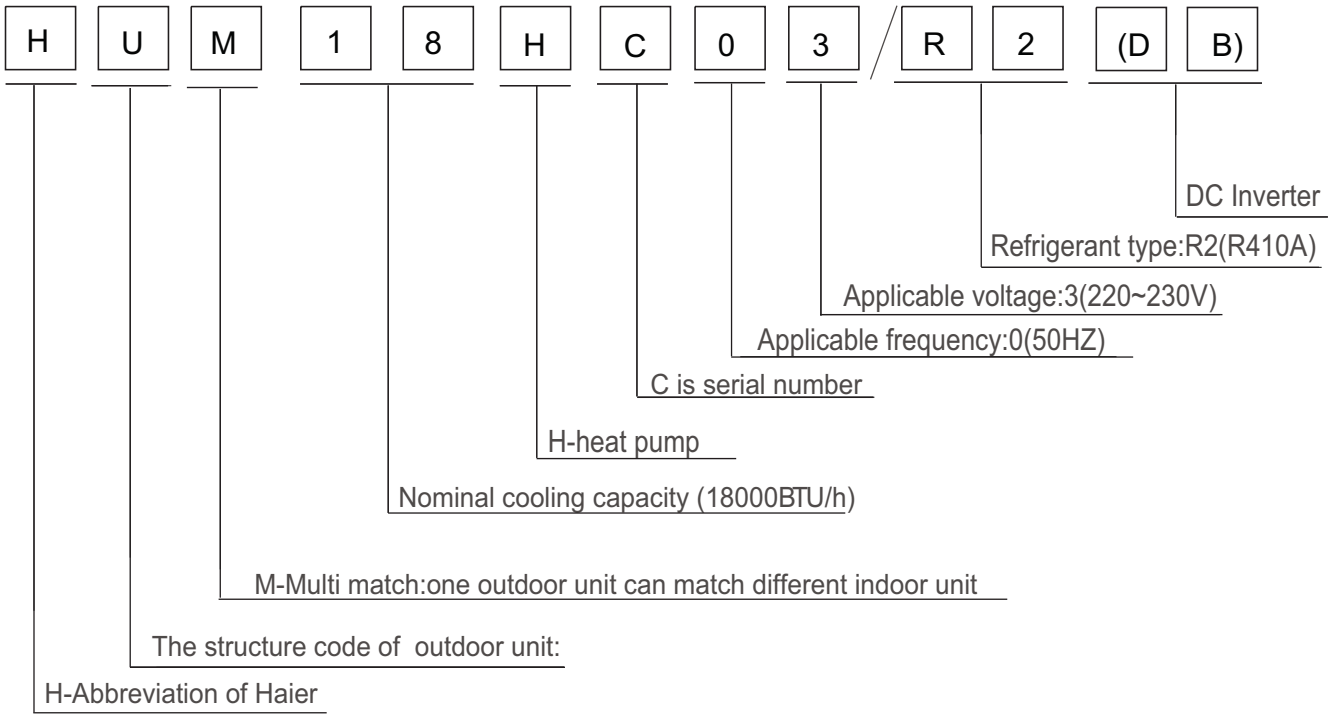

## 11.2.2 Module Board Circuit Diagram



# 12 Description of coding rules of unit model


H S M 1 8 H EKC 0 3 / R 2 (D B)
DC Inverter
Refrigerant type:R2(R410A)
Applicable voltage:3(220~230V)
Applicable frequency:0(50HZ)
apparance of indoor unit is EKC series
H-heat pump
Nominal cooling capacity (18000 BTU/h)
M-Multi match:one outdoor unit can match different indoor unit
The structure code of indoor unit: S(wall-mounted)
H-Abbreviation of Haier

HSM18HRAC03/R2(DB) means 18000BTU.


H U M 1 8 H C 0 3 / R 2 (D B)
DC Inverter
Refrigerant type:R2(R410A)
Applicable voltage:3(220~230V)
Applicable frequency:0(50HZ)
C is serial number
H-heat pump
Nominal cooling capacity (18000BTU/h)
M-Multi match:one outdoor unit can match different indoor unit
The structure code of outdoor unit:
H-Abbreviation of Haier

HUM18HC03/R2(DB) means18000BTU.

Examples:

HSU-07RD03/R1,It represents wall-mounted split type heat pump air conditioner.The cooling capacity is 7000BTU/h,and the power supply is 220-230V/50Hz,"D" means the developing sequence,and"R1" means the refrigerant is R407C.

# Sincere Forever

## Haier Group

Haier Industrial Park, No.1, Haier Road

266101, Qingdao, China_

E-mail: hractech@haier.com

Tel: +86 532 88936935

Http://www.haier.com

Edited by : Zhao Ni
Zhang Fei

Signed by : Yang Bifei

Approved by: Wu Hongjin